

THE *Country* GUIDE

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THE *Country* GUIDE

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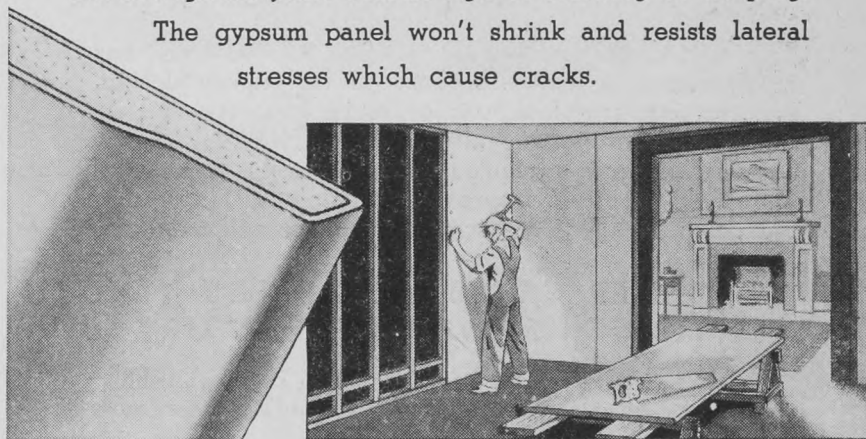
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Under The Peace Tower

NOW that there is talk of appointing a Canadian Governor-General, it might be interesting to see what a governor-general makes—or gets. In all, His Excellency Field Marshal The Right Honorable The Viscount Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C. and LL.D., receives \$170,134. But don't imagine he keeps it all. Like the man who gets \$1,000 a week but who lives well, our governor-general cannot precisely pocket all he gets. However, he needn't go back to England (or Ireland) third class either.

His basic salary is £10,000. But instead of this being exchanged from sterling at the current rate of \$3.08, we give His Ex the benefit of the old fictional rate of \$4.86 2/3, which yields him \$48,667 a year. On this he pays no Canadian income tax, according to my intimates. Nor is there any evidence that he pays any English income tax either.

He gets a field marshal's pension which is likely taxable. But that does not come into our calculations.

He is paid many other sums which he must of course pay out again. From one source he gets \$2,400 for his secretary's salary; and from another \$7,600. Strangely enough, you could get good secretaries, away back, for \$2,400 per annum. During the years, the extra has been added, and now Major General H. F. G. Letson receives \$10,000 a year.

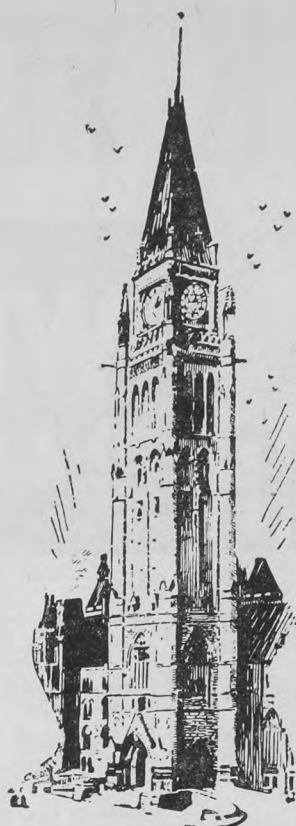
He is voted \$111,468 per annum for what is called "office." This breaks down into salaries, \$38,348; allowances, \$120; printing, stationery and equipment, \$8,000; and sundries, \$65,000. Of the latter, \$50,000 is earmarked for travel. In all, it works out to \$170,134, as aforesaid.

An English correspondent here has worked it out that at the present crucifying rate of tax in Britain, His Excellency would have to be making over £2,000,000 or more than \$6,000,000 in Canadian money, to get the net income that he receives in Canada.

It is perfectly true that he does not keep all the money he gets. But then, nobody else does either. The man earning \$25,000 a year, for instance, may have expenses which eat up a lot of his \$25,000. But these to a degree are optional. Then too, he at least has the fun of getting the money, and also the fun—more fun sometimes—of spending it.

The Governor-General's salary, emoluments, honorarium, or whatever-you-call-it, is a sacred cow in these parts, and is not discussed. But you can find it all on page 20 and page 131 of the estimates for the year 1951, published by The King's Printer.

TO return to talk of appointing a Canadian Governor-General. Up till now, three names have been suggested. One wonders if a Canadian-born "His Ex" will be treated as considerably by his own people as English, Irish or Scottish governors-general have been in the past. True, a Canadian would be paid in dollars and not in pounds. True too, the whole atmosphere of Rideau Hall would change, and instead of it being redolent of some English castle—or at least as we imagine an English castle



might be—doubtless it would take on the attributes of Canada. The stiff correctness of English secretaries, functionaries, equerries, and aides likely might change to the more easy-going Canadian ways. You cannot imagine a man from northern Manitoba or from southern Saskatchewan being so painfully "correct" in his conduct as an Englishman living "by the book." On the other hand, we might overdo it in a slovenly, hail-fellow-well-met style. However, whether things are carried on by Emily Post rules or by summerfallow protocol, the question is: who is in line for the post?

First I hear that the Right Hon. Vincent Massey might be appointed. Former High Commissioner to London, before that plenipotentiary to Washington, art connoisseur, distinguished Canadian, erudite, many think that it will be Mr. Massey. Indeed, some go as far as to say that it is already "in the bag" for the Durham County gentleman.

Then a school of thought developed that suggested the logical choice would be Mackenzie King. Those who have seen Mr. King recently seriously doubt that he is up to the rigors of this job. What is more, since he would not take on the job till Viscount Alexander leaves, a year hence, he would be almost 77 before he entered Government House, would not finish his vice regency till he was 82. Anno Domino alone washes out this story.

But there is now considerable speculation about Rt. Hon. Louis St. Laurent being the first Canadian-born governor-general. First of all, his health is good, but he has to watch himself. He blew his top in the Commons a month ago, and many think this is a sign of high blood pressure, or some other health problem consonant with his age.

Newspapermen are already writing stories about the next prime minister. Many reliable members of parliament do not believe Mr. St. Laurent will run again. Money he has, home life he

(Please turn to page 17)

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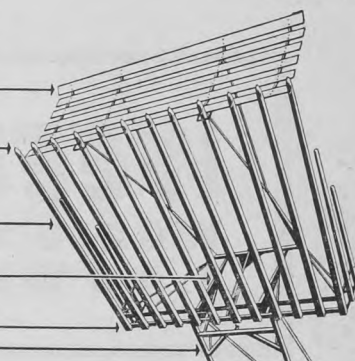
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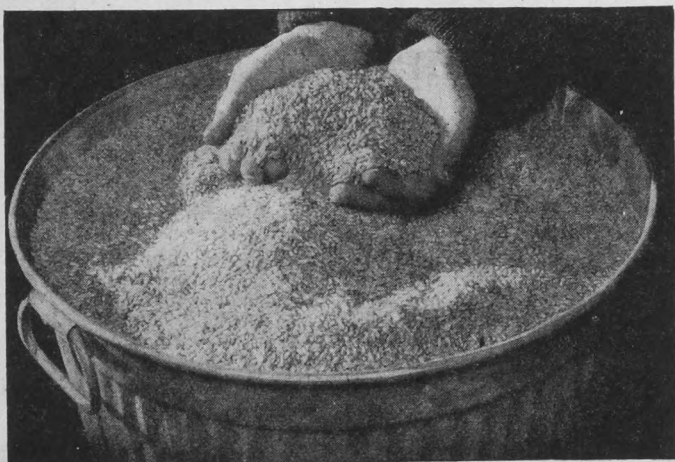
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For Better Land Use

IT is difficult to over-emphasize the importance of good land use. Indeed, the efficient use of land for maximum production, is more important than prices in determining the level of farm living. The reason this statement carries with it so large an element of truth is because high prices are of little value without production. Extreme price recessions, such as we experienced in the thirties when wheat sold as low as 38 cents per bushel, Fort William, are very rare. It may be, and probably is true, that over a long period, the general level of prices is below the total average cost of production for all farmers, taken as a group. This is not necessarily true of those who use land efficiently. These men can operate farms profitably, even when prices are, relatively, quite low.

During the first fifty years of this century our attitude toward the use of land has changed materially, particularly in western Canada. In the early years, land was comparatively free, and costs were low. Everyone was satisfied to make sacrifices of convenience and comfort, for the sake of acquiring title to a quarter, or a half-section of land, or perhaps more. It was World War I, however, which brought us sharply up against the realization that the general level of prices had risen, including farm costs, as well as farm receipts. The recession of 1920 brought many farmers close to ruin. A new attitude began to appear toward land, and in Saskatchewan, for example, a Better Farming Conference was held in 1920, the purpose of which was to promote a system of farming which could be carried on profitably in the semi-arid regions of this continent. Out of this grew a Better Farming Commission; and out of this, again, the idea of surveying the soil of the province in order to provide a foundation for a more complete survey of agricultural possibilities. Within about 15 years the Soils Department of the University of Saskatchewan had made a more or less complete general survey of the soil of that province. Many farm business studies had been made in the meantime, by the Farm Management Department of the University. By 1936, a more complete and intensive study of the land was undertaken, which was related directly to its economic aspects. We had, in fact, begun to consider seriously, suggestions concerning land use.

Conserving soil is an important factor in efficient land use.

Saskatchewan begins the long process of correcting the evils of unwise settlement, by intensive studies of land use, looking toward better farm living and more efficient production

by H. S. FRY

The first land-use study in Saskatchewan was in the south-central section, where 56 municipal units were studied jointly by the Dominion Economics Division and the Department of Farm Management of the University. "Land utilization studies," said this report, "aim at determining the type of farming best adapted to an area and to individual farms. They indicate the relationship between climate, soil, topography and the various economic factors—and the effect of these on income and standards of living. They provide a basis for the application of sound credit and taxation policies, and indicate the financial support likely to be available for the maintenance of public utilities and social services."

Even such a study as this, however, was not sufficient, and by 1945 the Saskatchewan Government had appointed a Land-Use Committee, which was instructed to make a more intensive

study of a smaller area in southwestern Saskatchewan, consisting of 16 rural municipalities adjacent to Swift Current. The idea of efficient land use was coming into its own.

Meanwhile a considerable amount of confusion had developed—which continues to this day—as to the relationship of soil conservation to better land use.

Many people still use the terms interchangeably, whereas soil conservation is only a means to better land use. Important as it is to maintain soil in a good state of fertility, or to prevent it from being blown away by wind, or washed away by water, the ultimate purpose remains the same, namely, to produce at the highest practicable level of efficiency.

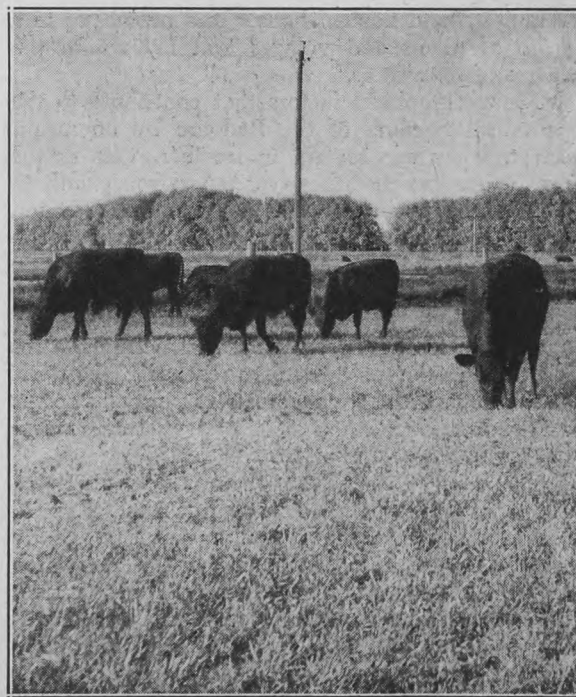
THIS brings us to one of the most important objects of land-use studies—the determination of the kinds of crop which can be best grown on soil of a particular class, and in areas with known, average amounts of rainfall. Many evils associated with the early rush of settlers across the prairies still have to be corrected. One of these is the persistence with which too many farmers have attempted to grow wheat on lands that are sub-marginal for wheat production. It is not a good commentary on the efficient use of land, that many townships have been supported, year after year, by payments under Prairie Farms Assistance, even during what was one of the most favorable cycle of years for crop production in the history of western Canada. This misuse of land continues, and one of the purposes of intensive land-use study is to measure the effect and count the cost.

Three or four years ago The Saskatchewan Department of Agriculture divided the province into 36 districts, each to be served by an agricultural representative. An act was passed authorizing the setting up of an agricultural conservation and improvement committee in each municipality and the establishment of an agricultural conservation and improvement board in each agricultural representative's district. The agricultural representative thus became the link which joins the committees, the boards and the provincial department of agriculture.

The government in Saskatchewan not long ago took another step in the (Please turn to page 36)



*Left: Marginal wheat lands yield poor family living as moderate-sized grain farms.
Right: Pastures offer the best hope for much land under semi-arid conditions.*



The Ravaging Red

IT is likely that in years long past the Indians who inhabited the hunting grounds on the shores of the Red River found it necessary to occasionally seek higher ground. They knew, as their white successors later learned, that the mild and friendly Red River could, if the conditions suited, turn berserk, leap over its banks and careen wildly over the land for many miles around. In most years it shook its watery mane but contained its anger. That was not always so. When the Indians had reason to believe that the River would lose all restraint, they packed up their few belongings and moved to higher ground, and unobtrusively moved back when the waters subsided to their usual summer mildness.

In the years that followed, the early Red River Settlers found the river an occasional enemy. Their successors opened up this rich pot of black gold, built their houses, bred their livestock and planted their crops on three million fertile acres. They knew, as did their forefathers, that the river could misbehave, but it had not behaved as badly since 1861 as it was destined to behave 89 years later. Few men living could remember a flood such as the one which covered a large part of southern Manitoba in 1950.

The suffering and loss that the flood has caused is incalculable. The Indians in ages past could gather up their few belongings and find dry land without too much effort. Not so the farmers of today. When they left they took a suitcase full of clothes, the fortunate ones drove off some of their livestock, and the more fortunate escaped with some of their machinery. Many left granaries bulging with grain, fields capable of producing rich crops, buildings and farmyards that had been tended with care, machinery that was costly, and frequently livestock on which their livelihood depended. All were left to the mercy of the rushing Red River.

In the first phase of its attack the river did not rush. The approach was slow and insidious. A rabbit dozed on a hill. When a craving for food sent it out foraging it found that all about it was water and only the knoll on which it rested was dry. Soon this too was covered and the even surface of the flood waters was broken only by the dying struggles of a water-trapped rabbit. A meadowlark, returning from the south, sought out its old nesting site, and finding water as far as it could search, flew off in confusion.

THE disastrous Red River flood of 1950 has become a matter of the record. At its peak the river reached a height of 30.3 above datum within the city of Winnipeg, a height near which it lingered for a matter of 10 days. At the pinnacle of its power it flooded 675 square miles of farm land containing at least 2,000 farm homes, flooded or damaged many thousands of homes in Greater Winnipeg, and flooded houses and businesses in a score of towns and villages that lay within the sweep of the waters.

The geographical factors that contribute to the periodical flooding of the Red are by no means secret. They are several in number. One is the unique feature that the river flows from south to north through country that is normally ice bound during the winter. This has a very serious implication. The warm spring weather thaws the snow on the prairie knolls and southern slopes, and the smaller tributaries begin to pour into the Red and loosen the ice at the southern end before the ice is altered in the more northern reaches of the river. In this regard the spring break-up normally occurs at Breckenridge, Minnesota, two to three weeks before it shifts at Emerson.

The result of this is that there is a tendency for the crest of the flood to move down the Red toward the later break-up region, so that it frequently reaches the mouth of a tributary at the time when the tributary is near to its peak flow. Thus, the river picks up one large addition after another. This is in contrast to the Saskatchewan River, which flows northeast for a thousand miles through approxi-

Southern Manitoba suffers the most destructive Red River flood in eighty-nine years

by RALPH HEDLIN



These pictures give some further idea of the extent of the flood. Notice, in the picture below, the building that the water has tipped.

mately the same latitude so that the ice goes out and the river rises throughout its length more or less within a short period of days.

The direction of flow of the Red has a further implication. As the crest progresses northward it reaches each successive section of the river system before the latter is entirely free of ice. The ice obstructs the free flow of the water and retards the velocity along the whole length. Measurements made in the United States of the quantity of water flow in the early part of the spring flood period have found the water from two to seven feet higher than could have been expected to be the case had the river been freed of ice and the water movement had been unretarded.

The Red and its tributaries drain an area of approximately 100,000 square miles in North Dakota, Minnesota and Manitoba. The river flows from the south, and separates North Dakota on the west and Minnesota on the east. The Ottetail River has its source near Lake Itasca, Minnesota, which is also the headwater of the Mississippi. It



[Guide photos.]

flows southwest for 70 miles, joining the Red in the bed of the former glacial Lake Agassiz, near to Breckenridge, Minnesota, and Wahpeton, North Dakota. The Red River flows very slightly west of north, but meanders sufficiently to double its length. In its passage through Fargo, Grand Forks, Emerson, and on to Winnipeg, it nowhere departs more than four miles on one side or the other from a straight line. It is joined by the Ottetail River, the Bois des Sioux, the Wild Rice, the Sheyenne, the Minnesota Wild Rice, the Goose River, the Red Lake River, the Snake, the Park, the Two

Rivers, the Pembina, and in Canada by the Roseau, the Rat, the La Salle, Assiniboine and the Seine.

These tributaries come down from higher land into the Red, which flows across the old bed of glacial Lake Agassiz, the great body of water that lay across southern Manitoba as the ice receded at the close of the Ice Age. The slope of the river bed is a mere foot per mile. This serves to contribute to the flood danger because the very gradual slope does not ordinarily give the Red sufficient velocity to carve out for itself a generous channel. This is also true of the tributaries after they enter the old lake bed, that now comprises the Red River Valley. The river channels are large enough to accommodate the flow of the water if large flood waters do not appear. If a great body of water tries to make its escape to the sea through these channels—as is recorded in 1826, 1852, 1861 and again in 1950—the channel proves inadequate and the water piles up and spreads over the adjoining farms and towns.

The immediate cause of this rush of water is a combination of circumstances from the previous fall. It starts with heavy rains in the fall which saturate the soil and raise the level of the water in sloughs. It is followed by a winter of heavy snowfall and the flood is made more likely by a late spring and a rapid thaw. If the floods from the different tributaries then arrive simultaneously in the main stream of the Red an extreme flood is likely to result. If they arrive more or less consecutively the major part of the water from one tributary will have passed before that from the next one arrives and the water is not likely to rise to any great height.

THESE factors combined with devastating force this spring. The resulting flood has scattered the Valley farm families all over western Canada. More than 100 carloads of cattle were evacuated by railroad. Many cattle and other livestock were shot. Some others drowned. Perhaps 1,000 head of livestock were found grouped on patches of high ground or roads throughout the flooded area. Feeding has been a major problem. The owner was sometimes able to manage but his efforts have been supplemented by the dropping of bales of hay from the air, or delivery by R.C.M.P. launch. In the early days of the flood even this limited relief was most difficult, due to rain and rough weather. As the flood period dragged on the system increased in efficiency, due both to improved weather and the gaining of experience by the husbandmen in this new form of cattle feeding.

Every farmer in the Red River Valley has a story to tell of loss and attempted salvage. Some tell of cattle herded onto a ridge or up on a hay or straw stack. The advancing flood in too many cases rose up over the small island and the stock were either swept away or shot by the owners to save them suffering. This was more particularly so in the central area that reached the proportions of a mighty flowing lake.

Many farmers have the greatest difficulty in evaluating the damage that their places have suffered. P. Danylchuk, who lives a mile east of Emerson, knew before the waters receded, that he had lost \$1,000 worth of grain, and that his buildings were twisted and broken. At its crest the flood was pouring four feet of water through his yard. Until he gets well on with the job of cleaning up and straightening buildings it will be hard to judge the extent of the loss.

Alistair Fraser had seen his poultry house tipped up and moved over against two trees, where, not content, the flood tore the shingles off one side. The ice house was shifted to another part of the yard and the floor and lower walls of the new house have been ruined.

The land that F. Reckseidler of Morris operates is right on the fringe of the flood area, some at Dufrost and some at Sewell. In spite of that he is not likely to be able to sow any wheat, due to the cold and unseasonable weather. Water from rain and spring run-off still lies in pools on the fields. Many in the valley who (Please turn to page 70)



Two farmsteads near to Morris, Manitoba, that have suffered the severe ravages of the flood.



Left: There was no traffic through the customs at Emerson when this picture was taken.



A stall for the milk cows has been built on Highway No. 14 near the site of old Fort Dufferin. The monument in the background marks the point where the North West Mounted Police set up barracks after they entered the West.

Below: The Guide photographer stepped out of the canoe directly onto the roof of the machine shed to take this picture.



Manitoba Flood Pictures

— Guide Photos —



Buster barked vigorously as we approached the farm of W. Remus, but had to restrict his movements to a built-up area about 10 feet square in front of the house.

During the flood period the railway unloaded at this improvised pier and passengers and supplies were taken to Emerson by motor launch.

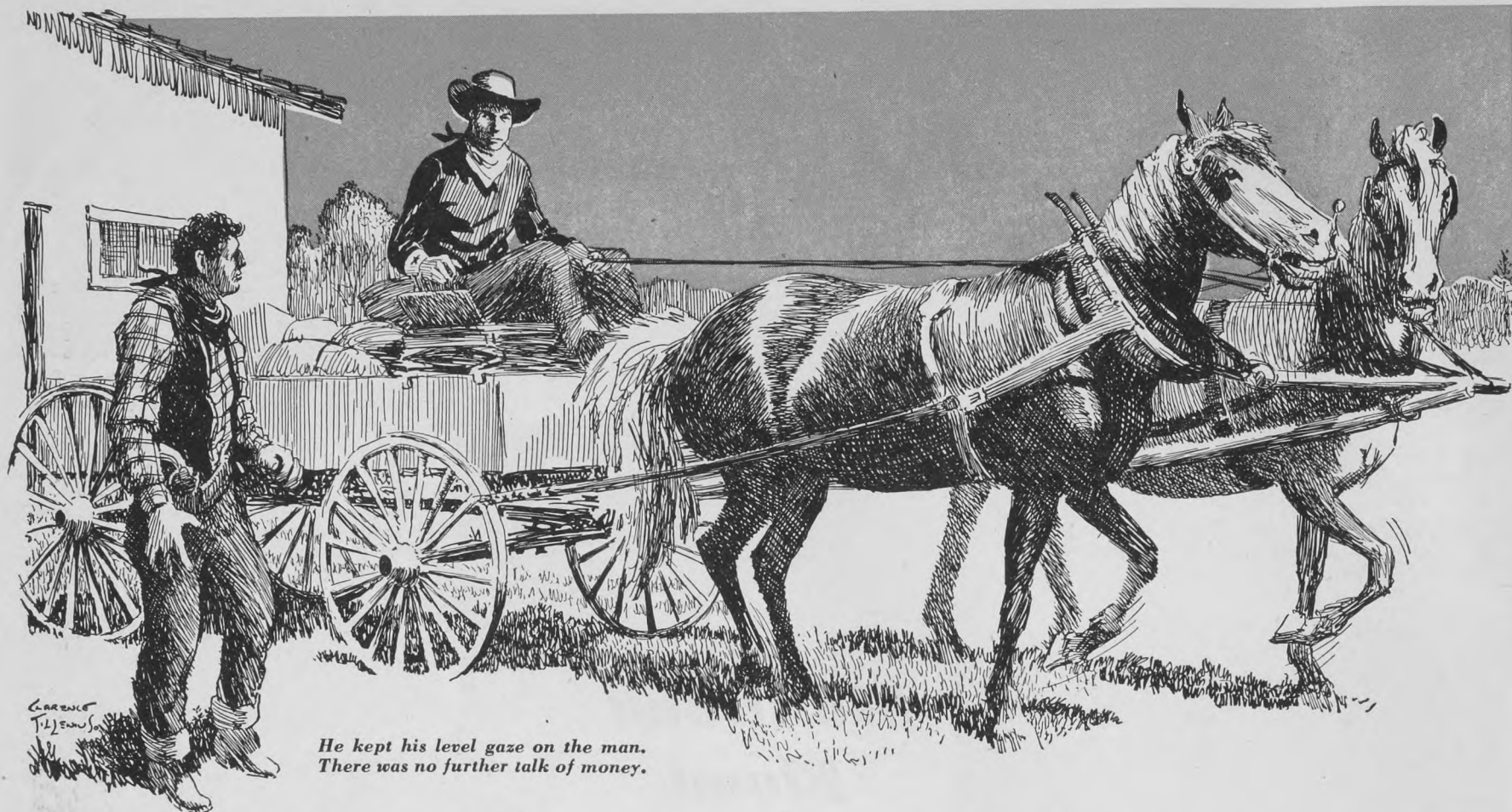


This barn clearly indicates the height of the water.

Lower left: This launch is passing at high speed over a fertile field that will grow no crop this year.

Traffic on the new concrete highway from Winnipeg to Minneapolis comes to a slow, sure stop.





*He kept his level gaze on the man.
There was no further talk of money.*

PART I

BEYOND the car window the Texas prairie stretched grey and endless in the twilight—mile upon mile of barren frontier without so much as a house to break it, nor a hill to change its immense flat shape. In the passenger coach, Lew Rand braced his long legs on the straw seat opposite and turned his face from the monotony of that view. He was not used to train travel, and the bucking and lurching of this three-car combination, on a track too hastily laid in the boom of two years ago, was more punishment for him than any wild horse he had ever ridden.

Four men were playing poker in a section up ahead of him. They had a suitcase laid across their knees for a table, and the pot of gold coins and greenbacks showed that the play was big. He had a sudden urge to go up and join them. His elbow pressed against a money belt that was like a thick rope around him beneath his clothes. Seven thousand dollars would make a game! But then he shook his head and pushed the urge away. He had a use for that seven thousand dollars; one single purpose, none other.

This self-discipline was a new thing in Lew Rand's life, and it brought a faint smile across his wide, straight mouth. He thought of how it would have been, even as late as two years ago. One dollar or seven thousand, it wouldn't have mattered then . . . there was always tomorrow, a new day, a new start.

Tomorrow. . . . He sobered at that. Tomorrow, even tonight, perhaps, he would be seeing Connie Lee.

Thought of a girl he had not seen for two years put a moment's softening on Lew Rand's features. It relieved a strictness that had made him look older than his twenty-five years. He was a big man, yet so well-proportioned, shaped all in a single piece, that there was no bulk about him. His face was flat-cheeked, high-boned, sharply angled across the chin, with deep sun lines spreading outward from his oak-brown eyes. There was humor in it, and yet it was a guarded face; and after the moment's thought of Connie Lee, his expression set again like a brown mask, severe and watchful.

The car door up in front opened, letting in dust and a clatter of iron upon iron. Then it closed and the conductor came down the aisle, lighting the overhead oil lamps with his long wick.

He paused at Lew Rand's seat. "Half an hour

more," he said. "Guess you'll be glad to see Clear Fork."

Lew glanced up. "The question is, Sam, will Clear Fork be glad to see me?"

He had known this thin, grey Sam Tanner when Tanner was a stage guard, before the branch railroad came into west Texas.

"Sure, I know," Tanner agreed. "But you've been away two years. That's a long time in this country. Things happen and then other things happen to make people forget." He smiled. "You weren't so wild at that."

"Wild enough," Lew said.

Tanner braced himself against the car's uneven sway and his grey eyes showed their curiosity. "Been wondering why you came back."

Lew Rand shrugged and made no comment.

TANNER persisted. "Can't be for your old job with Tom Lee's Circle Dot. Tom's moving north, did you know that? Lock, stock and rain-barrel. The dry years have run him out—that and his old trouble with Gil St. Clair's Pitchfork. Tom got himself an Indian beef contract and is trail-driving two thousand head of cattle north to Dakota. He'll earn his money, though." Tanner paused; and then his voice had deep concern in it. "All I know is what I hear, and I've heard that Tom Lee will never make his drive. Gil St. Clair wanted that contract. He thought he had enough political pull to get it, and he didn't. But he's making up a trail herd anyway, going north."

Lew Rand had stared from the car window, letting these facts gather in his mind. He turned his head and looked up at Tanner. "What else do you know?"

"Connie Lee is marrying Clay Carr tomorrow."

For one brief instant Lew Rand sat motionless, stiff, looking up; there had been few times in his life when he had been caught so completely off guard. He turned again to the window and his face was once more a set brown mask, with only a tight bulge of jaw muscles giving him away. For two years he had dreamed of this return; two years of working toward one end, and he saw those years

THE TRAIL

by HAROLD CHANNING WIRE

now with a feeling of cold emptiness. He had gone north as a forty-dollar-a-month cowhand, riding with the great wave of Texas cattle that had found an outlet in the Northwest. He had gone with the one determination . . . to come back something more than a cowhand, and he had. There was this seven thousand dollars cash in his money belt, and a thousand acres of land he was buying in Montana. He had done well in that boom time, used his head and made money. Now . . . "Connie Lee was marrying Clay Carr tomorrow."

Tanner was talking again. "Tom has made Clay Carr foreman of the herd they're taking to the Dakota reservation. I hear Connie has got their household goods packed in a wagon and is going to drive it up the trail." He wagged his grey head soberly. "It's a crazy thing to do. Twelve hundred miles, and no safe place for a woman, even a married one."

An unexpected shriek of the engine whistle cut him off. He pulled out his watch, looked at it and scowled. "Twenty minutes yet to Clear Fork. I wonder what—" He did not finish.

There was no other warning after that one quick shriek of the whistle. Lew Rand felt himself lifted and flung forward into the opposite seat. He was aware of Tanner sprawled flat in the aisle, and of the four poker players in a scrambling heap of arms and legs. All this happened with the jolting impact of cars buckling to a halt and the screech of the engine's brake shoes. At the first shock, the oil lamps flared up, then there was a crash of glass as the globes were torn loose. Now, suddenly, the car was dark.

These things had taken place in perhaps one minute of time. Lew rolled from the seat. He was on his knees in the aisle, bruised, questioning. His answer came next instant in a gun's heavy roar outside and a rattle of buckshot along the car windows. A second shot and that same hail of lead raked the opposite side. He saw Tanner start to get up, muttering savagely, and he pushed the old man down.

Illustrated by Clarence Tillenius

"Keep low," he warned. "No use getting your head shot off. Wait till they come to the door."

They crouched together. Lew had brushed back the shirt of his coat and a forty-five was balanced ready in his hand. But he was puzzled. No one knew he carried money. And why hold up so unpromising a thing as this three-car combination? There was only the one passenger coach. At the rear was a stock car, empty, with the mail car up ahead.

It was from the front direction that a third gunshot blasted suddenly. Tanner swore, the old fighting instinct of a stage guard sounding in his voice. Lew warned him again. "Better wait." A shouted order followed the shot, and footsteps raced along beside the passenger coach. A time of deep silence came then, broken by the drumbeat of horses, ridden hard. They vanished outward into the prairie.

Lew stood up. "Let's take a look." He stepped through the huddled poker players, keeping his gun ready, Tanner trailing him. Opening the door, he heard voices out on the ground and then the brakeman's lantern swung by.

Tanner called, "What was it, Pete?"

Over one shoulder the brakeman said, "Don't know yet."

Lew dropped down onto the roadbed and followed the swinging light. He saw the mail car door standing open. Up in the ruddy glow from the engine's firebox, two men knelt over one who was stretched on his back near the ties. Sam Tanner

Things began happening around Lew Rand on the train that carried him back to Clear Fork after a two-year absence. He arrived to find his old friends involved in difficulties—the opening instalment of a three-part thrilling serial

said, "Here you are!" Half a dozen long coarse hairs had been caught in the thorns. They were all a light dun color. He stooped for a closer look, and then the glow of his match showed another thing that he had almost missed.

It was a short length of braided leather rope. Reaching down, he found the knot had been jerked tight—too tight, he knew, when the rider had come back to make a quick get-away. The leather braid had been cut.

He worked for a moment with the knot, then had to break the brush limb. After that, climbing hurriedly back to the train, he slipped off the length of rope and coiled it in his coat pocket.

In his seat, with the three cars jerking forward again, he waited for Sam Tanner. They were almost to Clear Fork; low hills that edged the river were sliding past the car window, when the conductor came down the aisle, looking puzzled.

"Those men knew what they wanted," he said. "They didn't touch the express box or the safe. All they wanted was the registered mail, and our registered stuff to Clear Fork never amounts to much."

"Could you find out about this?" Lew asked.

Tanner nodded. "I already did. There was only one piece of mail in that sack. Something for Tom Lee."

AHEAD

pushed up at Lew's elbow, saying, "That's the mail clerk. They must have got him!"

But the clerk was not dead. His right forearm was shattered, and the engineer and fireman were making a hurried bandage.

"Need any help?" Lew asked.

It was the engineer who answered, turning a grimed face into the ruddy light. "Not here. We're getting this fixed up. But you might heave those things off the track." He jerked his head toward the locomotive front and Lew saw the heap of boulders.

"How many men?" he asked.

"Four."

"You see which way they went?"

"There's a gulch beyond those rocks. They had their horses hidden in the bottom."

Tanner and the brakeman had gone on and were struggling with the boulders. Still Lew waited, curious to know the facts. "What did they get . . . anything much?"

"Say!" The engineer's face hardened. "I don't know you, mister. Maybe you're asking too many questions."

"Maybe I am," Lew said.

He walked on quickly, came abreast of Tanner and asked, "Hold the train a minute, will you, Sam, if I'm not back?"

This was none of his business, he knew that. He could not see that the robbery of a jerkline train should concern him in any way. And yet there was this thing in his nature, more than curiosity, a strong need to know the facts behind any trouble that happened. Small things, in this land, so often led to big ones. He knew that, too.

A shallow was struck beneath the railroad not far ahead. He dropped from the low trestle and walked on, his eyes searching the sandy bottom. For a little way it was smooth and barren in the flood of starlight. Then a dark clot of brush off on his left drew him in that direction. The horses had been tied there, their hoofs leaving a pitted area around the brush. But the sand was too soft to give any detailed information as to the size of their shoes.

He brought a match from his coat pocket, struck it and searched the thorny brush top. Suddenly he

WHEN a blur of high stockyard fencing announced the approach to Clear Fork, Lew Rand stood up and pulled a bulky canvas bag from the opposite seat. In held all his possessions. His saddle, bridle, chaps and work boots filled most of it; while packed around these were extra shirts, socks, a deck of cards, his shaving outfit, a supply of cartridges, two pairs of hickory pants and a bundle of buckskin saddle strings. On top, first to be seen when the bag was opened, were two letters, the browned and faded photograph of a girl—Connie Lee—and a late copy of *The Stockman's Gazette*, dated April, 1887.

The train's twice-a-week arrival at the end of the line in Clear Fork was still a new enough thing to draw its curious crowd to the station. Bending at the window he watched the upturned faces slide slowly by, and even when the car had come to a halt, he continued a moment's critical survey. He had no reason to conceal his return to this town. If his enemies still lived and old troubles still existed, he would meet them openly. And yet this was a way he had, a deep-seated part of him, to know his ground before he stepped upon it.

There was another thing, too, that held him. On all the long trip south from Montana, then west across Texas, he had lived with a growing impatience. He had bridged all moments to this one. He had seen himself riding the ten miles on out to Tom Lee's Circle Dot, no matter what time of day or night it was, and Connie would be there. That eagerness was gone now.

A sudden commotion up toward the mail car drew the crowd that way. He shouldered his bag, went out to the platform and stepped down unseen behind the backs of men.

Word of the robbery had just been passed. It came relayed in broken sentences from one man to another. "Hold-up . . ." "Clerk shot . . ." "Get anything?" "Registered mail." And then one man, close in front of where he stood, muttered in a low voice to a companion, "Good enough. Let's go."

They turned together quickly, and the tall one who had spoken knocked into the bag balanced on

Lew Rand's shoulder. A sudden anger blazed in the dark face. He dropped both hands in a fighting gesture. "You want the whole dam' world?"

"Half of it, anyway," Lew said.

The man's shorter companion tugged him on. "Leave it alone, Hutch!"

They moved off, vanishing in the night and Lew repeated, "Hutch. I'll remember that."

The crowd shifted and he saw the wounded mail clerk being led toward the station. Little old Rebel Jackson, Clear Fork's postmaster, followed him. Then as the others, still curious, pressed into the station doorway there was left one solitary figure standing beside the train.

Lew walked toward him. The man did not move. His head, with shaggy grey hair beneath a black hat, was bowed on massive shoulders. Defeat was written in every sagging line of his huge body. But the big fists were clenched, and Lew saw that with a warm satisfaction; for he was remembering that courage alone in this man had made a great frontier ranch possible, and that even Clear Fork town owed its being to him. He was remembering, also, that Tom Lee was the best friend he ever had.

Even the sound of footsteps did not lift the shaggy head. Lew halted. "Hello, Tom!"

Tom Lee's head lifted then, coming up with the challenging fling of a wild range animal. "Lew! Boy, where have you been?" He put out his hand with a hard grip, his seamed face lighting up, and whatever it was that had weighted him down so heavily was swept aside by his warm greeting. "You're looking fine. The world been treating you all right?"

"In most ways, yes," Lew said. Their hands dropped and he saw the heaviness creep into Tom Lee's face again. "Tom," he asked, "what did this robbery mean to you?"

"Everything—" The fine old eyes clouded. "Everything I've got."

"I'd like to talk," Lew said. "But not here." The short excitement in the station had passed and men were coming out, walking close, their eyes too curious.

Lee offered: "Come over to the hotel, then. We've been in town since yesterday. Going back to the ranch tonight." They started across the station gravel. "Tomorrow, Connie," he began, and did not finish.

Lew nodded. "I know about Connie, Tom."

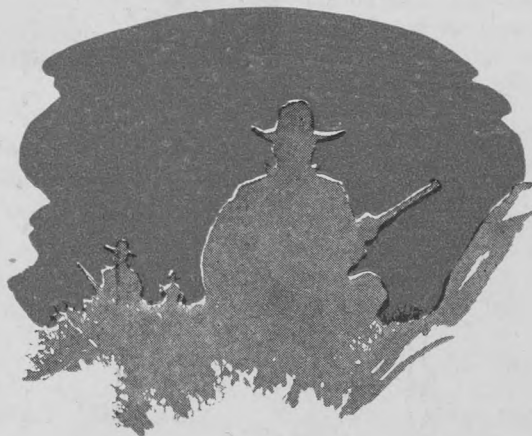
They paced on two silent steps and then Tom Lee took his arm, halting him. "Lew," he said, "I want you to understand this. Clay Carr is not my choice. But if Connie's heart is set on him, that's enough. There's only one thing I want in this world now, and that is for her to be happy. Do you see what I mean? You've come back. She's in town and you will see her; but remember . . . she's marrying Clay Carr tomorrow."

A faint smile turned the corners of Lew Rand's straight mouth. "Perhaps I needed that warning, Tom. I understand."

They moved on together, saying no more. Around the station they came into a street that was cross-barred with light from the saloons and store windows. Two years had brought a

change to Clear Fork; Lew Rand saw that. He had left it in a boom spring, a year when eight hundred thousand Texas cattle had gone north up the trail. Four thousand men and fifty thousand horses had worked those herds, and Clear Fork, a trail town, had been packed night and day with thunderous, unleashed life. Campfires had dotted the prairie for twenty miles in every direction. In that spring you were lucky if you could crowd into this street at all.

Now Clear Fork was like a bleached carcass that coyotes had picked clean. A familiar framework was here—the high false fronts, the dark broken line of sagging roofs, (Please turn to page 62)



No One To Trust Him

THERE is a valley in Saskatchewan that lies all winter long fettered by snowdrifts and beaten by malignant winds. Lean coyotes driven by fear and hunger slink through the brush and howl weirdly at the icy moon. Everywhere the intense cold saps the vitality of man and beast, and life ebbs low as the sap in the poplars.

Then comes a morning in May when all the trees burst into green and a dozen kinds of birds warble at the top of their voices. Crocuses embroider the greening hillsides, and the warm air smells incredibly of spring.

This kind of day stirs sweetly in the hearts of the people who live in the valley, so that they take its glorious hours and write across the dreary balance sheet of winter "settlement in full."

Life stirs keenest in the young. I was just out of pigtails. The mare I rode was the proudest of Dad's three-year-old thoroughbreds. We both drank in the intoxication of new life all around us. Now that the restricting snowbanks were gone there was delight and liberty in capering across the fields and over the hills where no path had ever been.

The mare was to be gaited, but today neither she nor I was in the mood for lessons. She fought the bit resentfully. Far to the west the hills stretched out, and the turf was soft and inviting. I knew what she wanted. I wanted it too.

"Dad will boil me in oil," I muttered, but I loosened the reins. Vixen lengthened her stride into a run, faster and faster 'till the ground sped past in a blurred streak and the air whipped by so fast that there seemed none left to breathe. For a little I surrendered to the wild glory of the swiftness and strength of the thoroughbred. I realized that a fall at that speed would mean broken necks for both of us.

PRESENTLY I tried to pull her in, but Vixen was warming up. She cleared a badger hole with a flying leap, and the roller-coaster thrill in my stomach took away what little breath I had left. The mare was bred for running and with her nerves taut as new-stretched barbwire she had to run.

I battled her grimly. She must not get away with this insubordination, or there would be a good horse gone to the dogs and all my fault. Tugging and swearing like the tomboy I was, I finally pulled her to a stop. She was wet from nose to tail, and trembling.

"Looks like we go for a nice quiet walk," I told her. "If Dad sees you like this he'll never let me on you again."

We were on the ridge where the wooded hills plunge wildly down to the river. The last plowed field was behind us, and ahead the hinterlands, forbidden to me since childhood for the dangers that lurked there.

I glanced back over the valley; the neat farms where respectable people toiled all week for a living and went to church on Sundays. Honest to the last penny, they were, in a world where black was black and white was white, and never, never a merging of the two into grey.

Ahead a dozen miles or so lay the Indian reservation where the old braves wore braids halfway down their backs and brown papooses played in the sunshine.

Between their world and mine lived wicked men, like Jack Dunn who made a living brewing forbidden firewater for the Indians. Many whispered tales had I heard about Jack Dunn and his shady dealings with the natives, and his even shadier ones with the dark-eyed squaws.

It was for my own safety, I knew, that I had been instructed never to cross the ridge; but surely



In our valley were respectable people who toiled all week and went to church on Sunday. Over the ridge lived men like Jack Dunn. On a spring morning, who could believe that evil could exist in the world?

by

BERTHA CAMPBELL KURJATA

a girl of fourteen is old enough to take care of herself. What nameless danger could overtake me while I rode Vixen? And who, on a morning like this, could believe that evil could exist anywhere in the world?

"We'll only go a little way, Vixen!"

An obscure path angled down the hill and off into the poplars. Soon I had passed a wooded region completely unfamiliar to me. I heard no sound behind me, yet something made Vixen rear and come down snorting, ready to run again. When

I got her under control a man had ridden up behind me, blocking my retreat down the path.

He was tall and lanky, with big-boned hands which were quiet at the reins of a handsome black stallion. He rode bareback, his long legs looking quite ridiculous. Under a battered stetson his face looked clean-cut, his nose and chin prominent but not repulsive. His grey eyes were cool and unfathomable, yet not unfriendly. He was about 35, I thought.

I held Vixen alert, ready to run if need be. I intended to keep well out of reach, nevertheless the black stallion looked like a lot of horse, and he was unhampered by a saddle. The man interpreted my appraising look at his horse and grinned inscrutably. I felt uneasy, then reassured as a nondescript mongrel trotted up to him with an air of having arrived. He sniffed inquisitively toward Vixen, but minded his own business in a well-behaved manner. The dog, I noticed, was sleek and shiny as the horse. Mom always said a man's character showed up best in his animals.

When his inscrutable grin faded the man looked stern as granite.

"Who are you?" he demanded. "What do you want here?"

"I . . . I was just admiring the scenery."

"Well, we have lots of scenery. I have it for breakfast every morning. Coffee, and a look at these wonderful hills."

"You mean you live here?"

"I do."

"But I didn't think anybody lived down here except . . . except people like Jack Dunn!"

He looked at me with a gleam of amusement. "It's a free country. I like it here."

"So do I."

"Your horse looks warm. You rode her far?"

"It's her own fault she's warm. She ran away with me. So I'm cooling her off before I take her home."

"Is that one of Rutledge's mares?"

"Yes. I'm Mavis Rutledge."

"Oh. Then we're neighbors in a sort of way, aren't we?"

"I suppose we are."

"Well, here it is noon, and I was just going up to the shack for dinner. Since you're in these parts you'd better come have a bite with me."

"Oh, really, I couldn't . . ." But at fourteen hunger is as sharp in a tomboy as in any other young animal. His face had relaxed. He neither looked nor spoke like a bad man. After my first alarm subsided, I had taken an instinctive liking to him.

"Well, suit yourself. It'll just be pork and beans . . ."

"I could use some," I grinned at him. "Thanks."

"I'll lead the way then, if you like. Watch out for low branches." (Please turn to page 46)



I pulled Vixen to a stop on the ridge.

Illustrated by Robert Reck

LEGUMES have played a very important part in the development of agriculture. This is particularly true of certain areas in the West, where legumes are recognized not only as a top-quality pasture and hay crop, but also as a practical means of soil improvement. Much of the new land now being brought under cultivation is deficient in nitrogen; and the growing of legumes, such as alfalfa and clover, is considered essential to successful crop production on these soils.

It is unlikely that legumes would be so widely accepted for soil improvement if they did not also provide such high-quality pasture and hay. Dairy production, particularly, goes hand in hand with legume crops. This is one indication of the important role of legumes in farm economy. However, in recent years there has been considerable concern over the problem of bloat in cattle and sheep grazing on legume pastures, and there are many instances where the use of these pastures has been discontinued.

The incidence of bloat may have increased in proportion to the increase in acreage of legumes, but the value of livestock has no doubt focused more attention on the problem. Considering current high market values, concern over the problem is quite understandable. Nevertheless, any restriction placed on the production of legume crops will tend to retard agricultural advancement. If these crops are to play as prominent a role in Canadian agriculture as their merits warrant, then some practical solution to the problem of bloat is required.

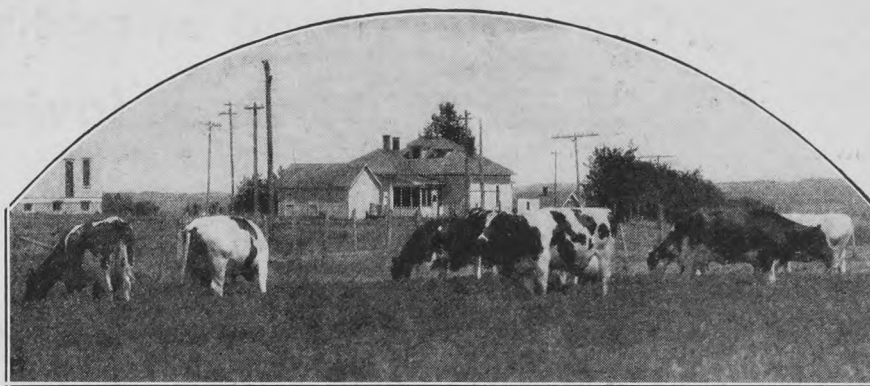
Can the danger from bloat on legume pastures be eliminated or reasonably reduced? Many years of research by numerous investigators have resulted in a great deal of information being gathered on the bloat problem. While much is yet to be learned, present knowledge indicates that a little planning, coupled with sound management, can greatly reduce the hazard of bloat. A brief review of the information now available will give a better understanding of the problem and a fuller appreciation of the value of the preventive measures which are currently being recommended.

BLOAT only occurs in ruminating animals such as cattle and sheep. It results from the first stomach, the rumen, becoming distended with gas. Large amounts of gas are normally produced in the rumen as a by-product from the fermentation of feed. Fermentation is one of the first of a series of processes essential to the proper digestion of feed, especially roughage. Under normal feed conditions the gas formed in the rumen is expelled by "belching," an action not appreciated in humans, but very essential in the every day life of ruminants.

Anything that prevents the normal escape of gas from the rumen will result in bloat. A potato or part of a turnip lodged in the gullet can cause it if not removed in time. Green, immature legumes, however, are the most frequent cause. In some way or other they interfere with the proper functioning of the belching mechanism. The way in which this is done is not well understood and accounts for the many theories brought forth to explain bloat.

Belching in ruminants is thought to be an involuntary reaction controlled by nerve fibres which terminate in the rumen wall. It is also believed that some stimulus is required from within the rumen, to initiate the belching action through the medium of these nerve fibres. Coarse roughage is

BLOAT



Above: Supplementary feeding on pure alfalfa pasture brought no bloat in twenty years.

Center: Mixed sweet clover, timothy and crested wheat grass is productive, luscious and nutritious.

Below: Dominance of grass in grass-legume mixture reduces bloat hazard.

There will still be some element of risk with cattle and sheep on legume pastures, but care will greatly reduce it

by H. B. STELFOX

thought to act as such a stimulus, by irritating the lining of the stomach. The fact that bloat has been caused by feeding finely ground hay and grain, while these feeds fed in their normal state did not produce bloat, gives support to this belief. Likewise, grasses do not normally cause bloat, presumably because their leaves are quite rough and have sharp edges, a characteristic which may help to promote belching.

RECENT investigations suggest that there may be another reason why immature legumes prevent belching from occurring normally. Certain chemical substances have been isolated from the juice of alfalfa and white clover leaves, which, when in sufficient concentrations, have a paralyzing effect on the muscles of the rumen wall. This effect is thought to interfere with the proper functioning of the belching mechanism. An instance was cited in which a steer bloated after grazing white clover for 20 minutes. Its blood was analyzed and found to contain two-and-one-half times as much of the muscle-inhibiting compound as blood taken from

two heifers which grazed the same pasture for 15 minutes but showed no symptoms of bloat.

Other theories attempting to explain the occurrence of bloat on green legumes have been brought forth from time to time. One of these proposed that more gas was formed from legume pasture than from other feeds and that the amount formed was too great to be expelled by the normal belching process. Actual measurements, however, proved that bloat-provoking feeds did not result in greater gas formation than feeds not associated with bloat.

Some investigators believe that the formation of toxic gases interferes with the normal activity of the rumen, while others believe that legumes form a compact mass which blocks the opening between the rumen and the gullet and prevents the escape of gas. Another theory is that saponin, a chemical substance in legumes and certain other feeds, increases the surface tension of the liquid contained in the rumen, and induces foam formation which, in turn, traps the gas in the rumen.

The theory that bloat on green legumes results from a lack of sufficient coarse roughage to induce belching, is the one most strongly supported by experimental evidence. It remains to be determined just how important the so-called "muscle-inhibiting" compounds are in promoting bloat.

INDIVIDUAL animals have been found to vary considerably in their susceptibility to bloat. A few abnormal animals are "chronic bloaters" and will bloat on any feed. Of the normal individuals, however, heavy feeders are the most susceptible and probably account for the high incidence of bloat in heavy-producing dairy cows. Breed differences may also exist, but, so far, no particular breed of cattle or sheep has been found to be more subject to bloat than another.

Bloat can be caused by a variety of feeds but, as already mentioned, green, immature legumes are the most frequent cause. It has been reported on all legumes commonly used for pasture. Sweet clover, however, is not as frequent a cause of bloat as alfalfa, presumably because of its lower palatability due to the presence of "coumarin," a substance responsible for the characteristic sweet clover flavor. Birdsfoot trefoil, a recently introduced legume, is claimed by some to have a reputation for not causing bloat. Information from several other sources, however, does not support this contention. The condition of the legume growth being pastured apparently is more responsible for bloat than the particular kind of legume involved.

Other feeds have been found to cause bloat. Among these are rape, cabbage leaves and other succulent feeds, such as rapidly growing cereal crops in the early stages of growth. Bloat on grass pastures is rare, but it has been reported on rye grasses in New Zealand where the growth had been stimulated by heavy fertilization. Bloat may also occur on dry lot feeding when a high proportion of concentrates to roughage is being fed.

Weather conditions indirectly influence the occurrence of bloat. Since bloat is most serious on lush legume forage, then any combination of weather conditions that promotes a rapid, luxuriant growth of legumes will increase the bloat hazard. A heavy rain immediately following a period of drought results in just such growth conditions and is often responsible for sudden appearance of bloat.

Occasional cases have occurred when very little legume was present in the pasture, and growth conditions did not. (Please turn to page 31)



The Styleline De Luxe 2-Door Sedan



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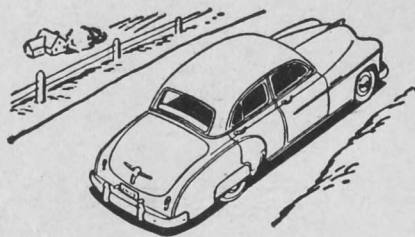
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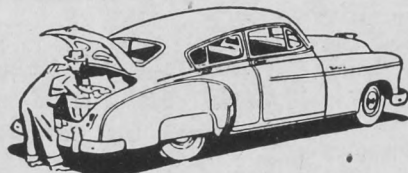
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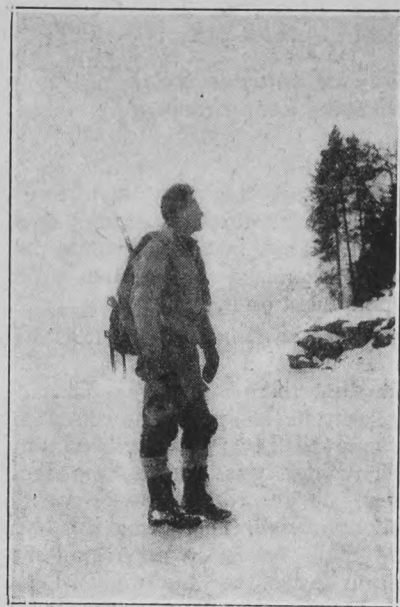
You Can Get a Cougar Without Dogs

It requires much study and exploration and some people enter into a partnership to make it easier

by **FREDERIC M. BAKER**

Left: Picking up cougar lore the hard way. The author scans the steep lake shore.

Right: The killer vanquished. It means 50 more deer in the bush next year.



WHEN the deer season closed last fall I should have felt satisfied to hang the old rifle on the cabin wall and wait till spring urged me into the mountains after grizzly, but there were a couple of angles that kept me from putting the trusty musket away to hibernate. The first angle was that I was by no means sated with hunting, and the second angle was that there was a job of indirect conservation to attend to. Now, you ask me, how can you keep on hunting and work on conservation at the same time? Well, I say, anything is possible in British Columbia.

Up to last fall I had been a very lukewarm conservationist, mainly because there was nothing much I could do about it, other than stopping short of the limit on trout and being careful about not wounding and losing big game. But lately, the local condition of the deer supply had been getting serious. Many was the weary day I had climbed the mountain plumb to the top, and heavy-footed the miles home again without sight of a deer. And not once on any of those trips did I see another hunter, so overshooting was not the trouble.

In town, there was much discussion among convivial friends about this state of things. Everything was blamed from lack of deer food and vitamins to coyotes and the government. I liked the blast the government got because it gave me the trail, so to speak, on my conservation project.

The government, it seemed, according to the thinkers, was niggardly about cougar bounties.

"For a lousy twenty bucks it ain't worth a feller's while to bum-hump through the snow after a cougar," I heard said.

"O.K." I thought, "maybe it isn't, but it gives me an excuse to keep hunting, rejoicing the while in the thought that, indirectly, if I am successful, the deer population will benefit."

THERE followed numerous evenings of book larnin' about cougars and how to get them. It was discouraging, that research. Boiling it down it seems that you get a stack of expensive, well-trained dogs and leave it to them. The summing up was that if you haven't got dogs you haven't got a chance. I hadn't even one dog, but I still wanted a cougar.

With dogs out the remaining methods were shooting or trapping. I knew you couldn't hunt up a cougar and shoot him. Finding gold mines is quicker. The books agreed that "owing to their wandering habits cougars are difficult to trap." Except, I noted, if you can find a recent kill.

You sure can get a lot of healthful exercise out of looking for recent cougar kills, I found. My big muscles just about grew out of my pants and all the kills I found were old. With all this discouragement behind me I figured that I'd better learn everything possible about the creatures and then take action according to what turned up. I needed fresh tracks before my studies could commence. At the

end of five days' mucking about in the forest I found what I wanted in three inches of new snow.

The tracks, heading west, were about ten hours old. They were four and a half inches across and looked reasonably impressive. "When the time comes," I thought, "I am not going to trust a number four wolf trap to hold that fellow. I will have to think of something else."

By way of learning the habits of the cougar family I tracked the big cat until dark.

Following a cougar's trail is very educational. He goes just where you think he wouldn't. He would rather stick to the brush back of a bluff than crowd the edge so he can look down. He will duck under a snow-weighted windfall where there is only a foot space for passage. He will crowd between two trees when all kinds of space is available to either side. He will cross a hot deer trail without a falter, yet go out of his way to follow a man's trail a week old. He knows why he does these things and it was my job to find out so I could guess ahead of him some time.

That night I marked the date on the calendar, explaining why to my curious and skeptical wife.

"Cougars are great travellers," I expounded, "usually keeping to much the same route, either

following in a circular line of travel or ranging back and forth. . . ."

"Do they ever stand still and sort of bounce up and down?" queried the spouse.

There are times when women do not grasp the seriousness of hunting. But I knew that at the end of my lecture I would produce an ace which would bring the female to heel, so I continued my instructive talk.

"My notion is to acquaint myself with this particular animal's travel route and by careful calculation discover certain places where the line of travel crosses itself. . . ."

"That's where he bounces up and down, I bet," put in my dear little hindrance.

"And then I will be prepared for him," I finished.

"But why mark on the calendar?" she asked.

"Because," I explained, "cougars are fairly regular in their habits and by making notes I can predict just about when the animal will return to a certain area."

The gal soaked this up for a minute or so, then asked, "Why do you want a cougar so badly?"

"In the first place a cougar kills at least fifty deer a year. I would like to save those deer for better things."

"In the second place?"

"In the second place, a cougar is a splendid trophy."

"You've got too many trophies," she expostulated. "I can't keep the dust off the deer and caribou horns now. I wear my arms out shaking bear rugs. If there's a cougar skin to fall over besides, I'll go batty."

"Well," I said, producing the ace that was bound to get her co-operation, "there is a small bounty paid by the government. If you furnish the encouragement so necessary, I may give you half the bounty money."

THE next morning I reversed things and back-trailed the cougar. The reason for this back-trailing was to discover the path taken by the animal in negotiating a long, rocky bluff that paralleled the lake shore about half a mile up the mountain. I found the tracks came off the bluff along a deer trail, then plunged through a cedar tangle so mantled with snow that every step brought down cascades of misery on my head. So I went no further figuring that I had a pretty clear sketch in my mind about two miles of the cougar's route. That was a start.

For the next two weeks I read lots more about cougar habits and bided my time, then started once more to prospect the forest for tracks. It was two days before I crossed fresh pad marks and, as before, I tracked ahead and back. The animal wandered around much as before, going in the damndest fool places, but only once did it pass in the same place as before. This was where a gradual slope came against a low bluff and a deer trail curved up to the crest of the rock. Beyond the rock there was a nice opening through a spread of brush and windfalls; here I was sure the cat would (Please turn to page 41)



Yes, you can get a cougar without dogs—but your wife may claim a share in the stake unless you proceed cautiously.

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OF THEM
ALL



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B.C. News Reports

Trade news reflect the variety of sources from which British Columbia draws her revenue

by CHAS. L. SHAW

BRITISH COLUMBIANS with their sensitive ears to the political ground are wondering how much longer coalition government is likely to last. The question has been asked many times during the coalition's eight years of office, but never so frequently as during the past few weeks.

Outwardly, the coalition gives a fine show of unity and it was really quite striking to see how members of the two old-line groups forming the administration rallied to each other's support during the trying period when the hospital insurance muddle was being dealt with.

Here was an issue that might have wrecked a government if it had been adequately exploited by a strong opposition, not because the idea of hospital insurance was bad but because its management had been so thoroughly bungled.

Well, the upshot of all the feuding and fussing is that the minister of health, George S. Pearson, responsible for the unhappy early stages of hospital insurance administration, resigned in ill health and was succeeded by Douglas Turnbull, an able young metallurgical engineer from Consolidated Mining and Smelting Co., who is still a political novice, having been elected to the legislature only last June at the last provincial contest.

Meantime, the whole insurance system is being overhauled. Friends of the government are wondering whether all the trouble may not have been a blessing in disguise. A rather costly blessing, of course, because it cost the taxpayers several millions of dollars to get the insurance structure functioning on a sound basis, but it provided a bitter lesson for the coalition and one which, if properly learned and acted upon, may prolong the life of the political alliance that has ruled British Columbia since 1941.

Outside the realm of government and politics, the immediate future is potentially both bright and dark, depending on two factors—whether there is a prolonged strike in the forest industry and whether the Fraser river goes on another rampage, as it did in 1948.

The loggers, already earning more than \$1.50 an hour for their part in sustaining the province's most important primary industry, have been offered by the operators an opportunity to increase their earnings by working more than the established five-day week and receiving extra pay for it—actually time and a half.

IN view of the fact that logging even on the west coast is a seasonal occupation to some extent, with long shutdowns in winter and again during the dry season of midsummer, most of the loggers work only about 170 days in the year. For that reason one might suspect that they would be only too glad to work the extra day for extra wages, especially since there isn't much to do on that sixth day in the remote logging camps anyway. However, the controversial union shop and check-off are involved in the present

dispute, and this may stymie the present negotiations. Operators resist the union shop because it would outlaw unorganized labor; the union leaders insist on it.

As for the flood danger, it is still too early for a comprehensive estimate, but there is a rather alarming similarity in the springtime conditions that prevailed two years ago and now. Last winter was one of the most severe on record and there was a heavy snowfall. The spring has been slow to materialize, with a long succession of cool days and nights. If the thaw on the mountain slopes comes suddenly and Old Man Fraser runs wild again, the reinforced dyking system along its banks will be put to a severe test.

Speaking of the Fraser, the old conflict between fish and power has been revived with the announcement of the B.C. Power Commission that it plans to test the possibilities of a hydro plant somewhere in the Horsefly-Quesnel district. The towns in that area would welcome the cheap water-power, and the latter might be the means of coaxing new industry there. On the other hand, unless such an undertaking is proceeded with cautiously, one of the major potential sources of salmon might be jeopardized. Before the disastrous rockslide of 1913, which all but ruined the Fraser River fishery for all time, the Quesnel-Horsefly area spawned 4,000,000 fish in a single season, or four times the entire spawning of the river's upper reaches last year.

THE government has given its undertaking that before any power projects are initiated on an important salmon area the fisheries authorities will be given every opportunity of voicing their objections and, if overruled, to co-operate in formulating a program that will reduce the danger to salmon to a minimum. The salmon industry represents an annual revenue of about \$25,000,000 to the province and that is not a negligible figure, regardless of the potential benefits of cheap power.

Memories of prewar times are recalled by the present alarms being sounded about Japanese encroachment on British Columbia's fisheries. Native Indians have been protesting that Japanese-Canadians are returning to the coast fisheries in such numbers that their employment is threatened; fishermen's unions have been passing resolutions opposing the prospective formation of unions of Japanese fishermen although they would not object to the Japanese joining their white groups.

The number of Japanese engaged in B.C. fishing today bears no comparison whatever with conditions before Pearl Harbor, however. It is only what might conceivably happen that has caused anxiety. Actually, the greater danger lies in the possibility that Japanese from across the Pacific might encroach on the deep-sea salmon, halibut and herring hordes and thus ruin the costly conservation work carried on in recent years by Canada in partnership with the United States

to maintain those species. Before the war Japanese, with complete disregard for the danger of overfishing caused international turmoil off Alaska. There is nothing to prevent a repetition of this situation unless restrictions are imposed in the proposed peace treaty with Japan. According to a recent statement in the House of Commons, that point is being considered by Commonwealth representatives in London; Canada will certainly insist on such a provision.

Meanwhile there is growing interest in restoring trade with the Orient, and that was to be one of the major aims of Canada's fisheries minister, R. W. Mayhew, who hails from Victoria, at the Commonwealth conference on economic affairs in Australia. "If any part of Canada is to benefit from a return of trading with the Far East, it will be the west coast," says Mr. Mayhew, who has not forsaken his idea for barter trading. There were raised eyebrows in Ottawa when Mr. Mayhew advanced the suggestion as a personal opinion several weeks ago, but he seems to have rallied considerable support since then.

Apart from the damaging effects of the long, cold winter on tree fruits in the Okanagan and the possibility of Fraser flood, prospects for farming in British Columbia are bright. Among growers there is a continuing interest in price support, as stated by Charles E. S. Walls, secretary of the B.C. Federation of Agriculture, they are merely looking for a cushion that will prevent a panic in prices when an export market is suddenly lost, such as recently happened to the poultrymen.

"On the loss of the export, which at best took only 10 per cent of our production, the price on eggs dropped overnight 45 per cent," writes Mr. Walls. "There was no need for this condition as at that particular time there were no surplus eggs for export. Therefore, this sudden drop in price, which was of temporary benefit to the consumer, was wholly a result of panic among dealers. Had the government imposed a floor price on eggs this would not have happened. . . . When the farmer has money and is able to buy, everybody is prosperous."

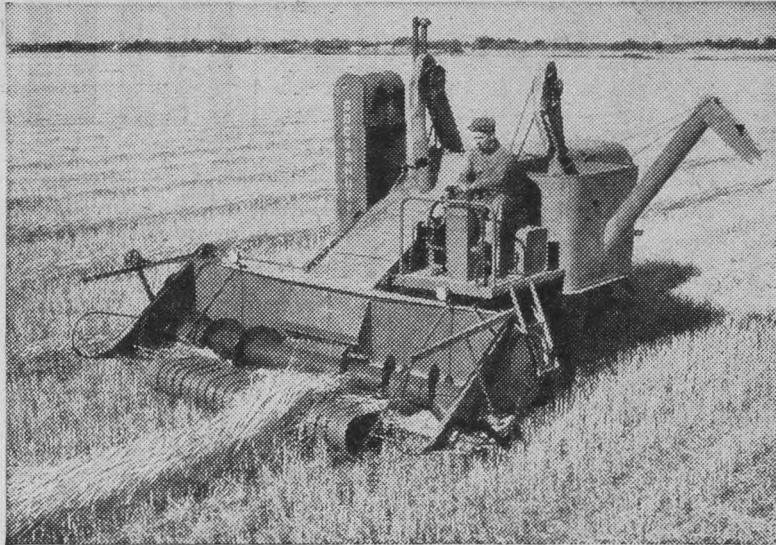
Peace Tower

Continued from page 5

has not. His house is in Quebec City, so are his grandchildren. Public life shortens one's life. What is political glory compared with an earlier epitaph? How measure political huzzas against having Sunday dinner at home with the grandchildren?

For one reason or other, St. Laurent would be the answer to the dilemma. Many would resent most living Canadians getting such a post. But French Canada would rejoice in having a "Canadien" honored as first native governor-general. English Canada would acclaim the choice widely. It would save the embarrassment of making a more controversial choice. It would also give the Prime Minister a perfect "out" from public life. Nor is there anything wrong with quitting while you are ahead. Who knows what another election might bring?

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You sit well forward on the Cockshutt S.P. Combine for a clear view of both crop and cutter bar. This permits a much more accurate

header adjustment that saves grain every time whether straight combining or picking up. You can cut right up to ditches and fences and in down grain cut any way in the field.

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Large diameter 8-bar rasp cylinder, lever adjusted open grate reversible concave, adjustable, open-type finger grate, extra long steel straw walkers and the full length grain pan all add up to unusually efficient separation. You cut and save all the grain with a Cockshutt S.P. Combine.

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Built in 10-ft., 12-ft. and 15-ft. cutting widths with corresponding variations in body widths. 12-ft. and 15-ft. combines available with either 10-ft., 12-ft. or 15-ft. headers.

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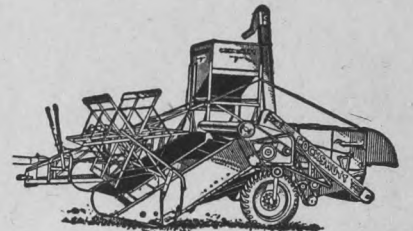


Harvesting days will be here before you know it so better make sure your combine's all ready to go the minute the grain is ripe. I always figure it's a good time to have my tractor checked over, too, just in case. And so, my friend the local Cockshutt dealer gets another service job . . . and I get a lot of peace of mind and no troubles in the field.

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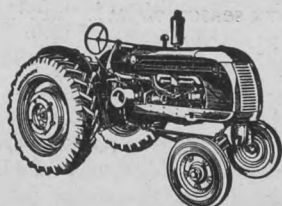


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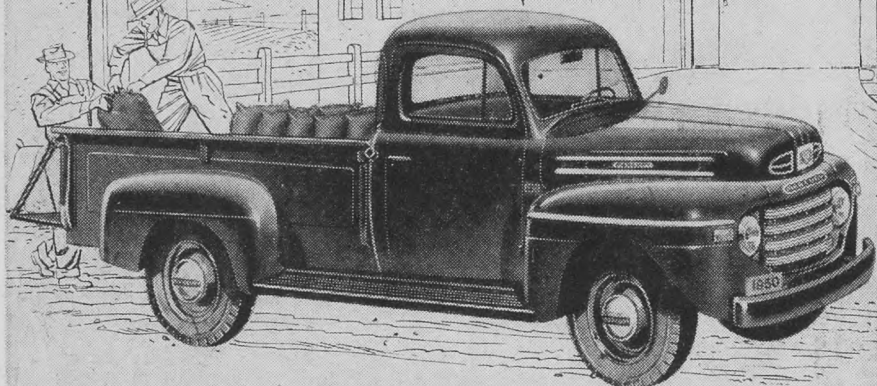


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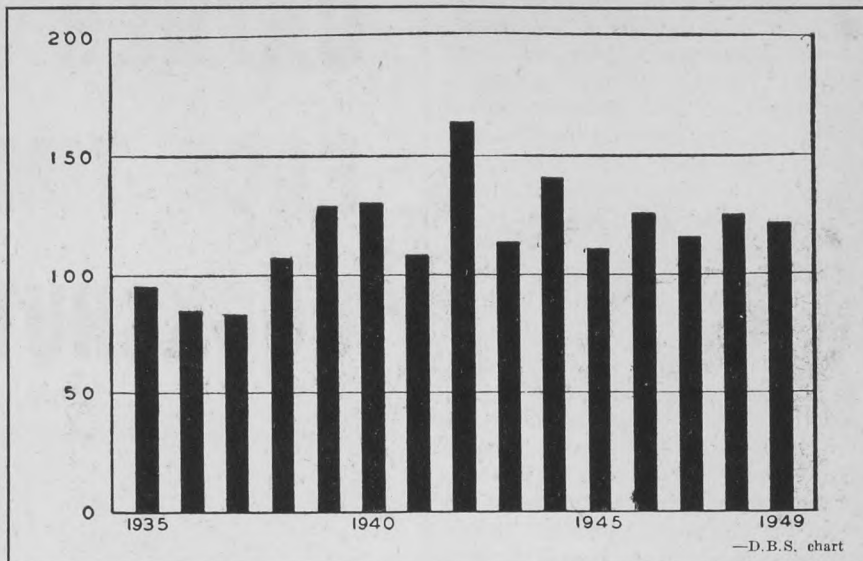
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News of Agriculture



This chart shows by percentage (figures left), year by year changes in the total quantity (physical volume), of all Canadian agricultural production.

Income And Production

ACCORDING to the Dominion Bureau of Statistics, Canadian farmers in 1949 produced 3.8 per cent less in physical volume of products (to be distinguished from marketings, prices and income) than in 1948, and 26 per cent less than in the bumper crop year of 1942. The index numbers of the physical volume of agricultural production for some recent years are given as follows, for Canada as a whole: 1935, 95.2; 1937, 83.7; 1939, 128.7; 1941, 108.7; 1942, 164.2; 1944, 140.4; 1948, 125.2; 1949, 121.8.

By provinces, great disparities are evident. Last year all eastern provinces and British Columbia increased the actual amounts produced. Manitoba's production has been the evenest since 1936, both in the increase to a peak of 174.2 in 1942 and the decline to 122.1 last year. Saskatchewan production increased from an index of 31.1 in 1937 to 247.9 in 1942 and declined to 125.2 in 1949. In Alberta, production rose from 71 in 1936 to 184.2 in 1942 and declined somewhat irregularly to 101.4 last year. British Columbia started in 1935 at 91.2, rose very steadily for six years to 115.5, dropped to 99.9 in 1942, reached its peak in 1946 at 151.9 and last year showed an index figure of 147.9, higher than any other province in Canada except Prince Edward Island, which had reached its peak at 162.5. The other four eastern provinces, Ontario at 126.4, Quebec at 132.5, New Brunswick at 147.8, and Nova Scotia at 110, each developed a peak index figure last year.

Net farm income for 1949 in Canada stood at \$1.537 billion as compared with \$1.600 billion the year before. Prince Edward Island, Nova Scotia, New Brunswick, Quebec and Saskatchewan each showed slight increases over 1948, with Manitoba and British Columbia showing the largest percentage increases.

The annual index number of farm prices of agricultural products in Canada for 1949 stood at 250.6. This was a slight recession from the 1948 figure of 252.5. For the first three months in 1950, the course of prices as indicated by these numbers was: January, 238.6; February, 242.7 and March, 246.2. Livestock, potato and egg prices were largely accountable for the increases during these months,

but compared with a year ago, current prices have been lower for all commodities, except livestock.

Irrigation In Saskatchewan

ACCORDING to Hon. I. C. Nollet, Minister of Agriculture in Saskatchewan, the provincial government has a \$400,000 irrigation program for 1950. It is expected that another 10,000 acres, in addition to the 15,500 acres irrigated last year, will be developed. Fourteen survey parties are in the field and projects will be commenced or further developed in 16 areas. About \$100,000 will be spent on the Swift Current project, and at Herbert, irrigation is expected to get under way this year on 5,000 acres of land. Last year at Spangler, in the extreme southwest, 125 acres were reclaimed and this year an additional 1,000 acres will be brought under water. At Estevan a 1,000 acre project begun last year is expected to be completed. The sprinkler system was used for 200 acres last year. Included among other projects are 670 acres near Vidora in the southwest, 6,000 acres west of Dundurn, and a dry-land-fodder project which may ultimately result in the seeding of 28,000 acres.

E. L. Gray, P.F.R.A. superintendent of water development, is reported as stating recently that in dugouts and other reservoirs in southeastern Saskatchewan 40,000 acre-feet of usable water is stored, or enough to irrigate 50,000 acres of land in 10 municipalities. This compares with 32,000 acre-feet of water used in the Taber irrigation area of Alberta. During the last year 800 units of mechanical irrigation systems had been installed on Saskatchewan farms, which compared with a similar number of individual or community irrigation schemes assisted by the P.F.R.A. during the 15 years from 1935 to 1950.

This spring, according to Mr. Gray, there was three times as much water in sloughs and other natural reservoirs as usual.

Wheat Agreement

UP to May 12 purchases under the International Wheat Agreement by 35 countries, represented widely varying proportions of total commitments under the agreement. Such countries as Austria, Ceylon, Domin-

ican Republic, Ecuador, El Salvador, Haiti, India, Nicaragua and Switzerland had completed, or practically completed, the purchase of guaranteed quantities.

Other countries, such as Belgium, Denmark, Egypt, Israel, Mexico, the Netherlands, New Zealand, Norway, Panama, Portugal and the Union of South Africa had completed a very substantial portion of guaranteed purchases. There remained, however, a substantial group of countries whose purchases up to May 12 were very low in relation to the quantities they had guaranteed to take. These countries included Bolivia, Brazil, Costa Rica, Cuba, Greece, Ireland, Italy, Lebanon, Peru, the Philippines, Saudi Arabia and Sweden.

Two countries, Venezuela and Guatemala, had each purchased slightly more than their guaranteed quantities. The United Kingdom had purchased all but 100,000 tons of her commitment of 4,819,000 tons. Of the quantity so far purchased, Canada would supply 3,646,010 metric tons, Australia 561,428 metric tons, the United States 460,350 metric tons and France 50,000 metric tons.

British Bacon Supply

BACON imports into the United Kingdom from Canada were 63,765 tons in 1938, 93,553 tons in 1948, 24,907 tons in 1949, and are estimated at 26,000 tons in 1950. It requires a total supply of about 420,000 tons to maintain a ration of four ounces of bacon per week throughout the United Kingdom. It has been estimated that, considering existing stocks, importations in 1950 will probably amount to 393,000 tons (2,240 pounds). Of this, it is believed that Denmark will supply 140,000 tons, home production 130,000 tons, Poland 30,000 tons, Canada 26,000 tons, the Netherlands 25,000 tons, Northern Ireland 17,000 tons, with the balance to come from Eire, other British countries and Hungary.

U.S. Farm Income

THE April estimate of 1950 farm income in the United States indicated cash receipts from marketings about 10 per cent lower than in 1949. Of the anticipated \$25 billion cash receipts from marketings, it is expected that "considerably less than the \$13.8 billion they realized last year" will remain to U.S. farmers as net income.

The U.S.D.A. estimates the total cost of farm production in 1950 to be almost as high as it was in 1949. With respect to farm income, the U.S.D.A. estimates: "An increase in volume of sales of livestock and livestock products may partially offset a drop in crop marketings, and only a slight reduction in the total volume of farm marketings is expected on the basis of present information. Any decline in total cash receipts will result primarily from lower average prices."

British Food Subsidies

THERE has been considerable discussion in the United Kingdom recently with respect to the cost of subsidizing food, and in particular with regard to the proportion of total subsidies which are received by farmers. It was announced in April that Britain proposed to spend £410 million on food subsidies during the

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SAVE MORE GRAIN FROM EVERY ACRE



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INVESTING your money in a time-proved and trustworthy John Deere Combine is sound business judgment. You're putting your valuable crops in the hands of a true guardian of the harvest—a combine that has proved itself as an outstanding grain-saver in every possible harvest condition—a combine that has earned a reputation for *harvesting more acres every day—saving more grain from every acre.*

Extra capacity in cutting, threshing, separating, and cleaning units... greater simplicity and ease of adjustment in handling all combineable crops... *strength and plenty of it* for steady, season after season combining and for low upkeep costs—these are the big reasons why *John Deere Combines lead in owner satisfaction.*

For large-acreage grain growers, the No. 55 twelve-foot combine, shown above, is the

leader of the self-propelleds. Ahead in everything that counts in self-propelled combine operation, you'll find the No. 55 offers you greater value for your money.

Cutting a six-foot swath, the John Deere No. 12-A Full-Width, Straight-Through Combine is the practical, general-purpose buy for smaller grain acreage or diversified seed crop farmers.

Another favorite with large-acreage grain growers is the No. 36 Level Land Combine with 16-1/2- or 20-foot platform. It's been an outstanding performer for over three generations.

Plan now to own a grain-saving John Deere Combine for this year's harvest. Your John Deere dealer will be glad to talk combines any time you're in town. Free folders will be mailed upon request.



Here's the big-capacity No. 36 Combine eating up the acres in heavy windrowed wheat. It's a star performer in every harvest condition.



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Here's an outstanding tractor battery value for you. It's the Willard TR-1-90 . . . built especially for tractors operating over rough terrain. And to give quick, positive starts in any weather. It's the ONLY battery with all these features: — Exclusive Vibration Resisting Plate Anchors . . . Exclusive Dome Type Rubber Insulators . . . Exclusive "Safety-Fill" Construction . . . Leakproof Seal . . . Reinforced Hard Rubber Containers. This long-lived Willard TR-1-90 is sold and serviced by quality-minded dealers everywhere.

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current fiscal year, and of this amount it was estimated that £246 million would be spent in respect of home foods and £164 million would represent the subsidies on imported foods. Thus, the rate of subsidy on home-produced foods would be about 43.6 per cent of their total cost, while the corresponding rate of subsidy on imported foods would be about 16.5 per cent.

The heavy subsidization of home-produced foods in the United Kingdom is shown by the total cost of the subsidization for some important food products, estimated for 1950-51: milk, £104.5 million; milk products, £50.3 million; cereals including cereal feeding stuffs, £90 million; bacon and ham, £36.4 million; meat and livestock, £61.3 million; eggs and egg products, £16.5 million.

For 1950-51, the estimated cost of the home food production services of the U.K. Ministry of Agriculture and of operating the Ministry itself is £42.4 million as compared with £54.1

million in 1949-50. Food production services controlled by the Ministry, account for £36.3 million of this figure and include, in part, the following: crop acreage payments £10.8 million; calf-rearing grants £6 million; grass conservation £1 million; Hill sheep and cattle subsidies £1.3 million; lime subsidy £6.3 million; land drainage £1.7 million.

As in Canada and the United States, British agriculture is much more prosperous now than before the war. In 1949, agricultural production was valued at £591 million as compared with £553 million in 1948. In the same year income from farming increased to £283 million from £205 million in 1947. These substantial figures compare with £60 million in 1938, and £190 million in 1946.

The £591 million value of agricultural output is estimated to have been distributed as follows in 1949: Bailiffs and foremen £13 million; wages £217 million; profit, rents and depreciation £361 million.

Get It At A Glance

Short items of interest to farmers

A RECENT news report stated that approximately 90 per cent of the students seeking private pilot licences across Canada came from rural areas.

OF 7,695,375 cattle in England and Wales and 1,569,570 in Scotland, 9,264,945 in all, 20 per cent have been "attested" for tuberculosis. The number of attested herds amounted to 47,299 at March 31. In Scotland the percentage of cattle attested is 39.5, and in England and Wales 14.1.

BRITAIN'S Royal Agricultural Show in 1950 to be held at Kidlington, Oxford, England, July 4-7, will cover 260 acres. There will be competitions for 19 breeds of horses, 21 breeds of cattle, 27 breeds of sheep and 10 breeds of pigs. The show was first held in 1839, in a seven-acre field.

NEW vice-chairman of the Agricultural Prices Support Board is S. J. Chagnon, who from 1927 to 1946 was actively connected with the Quebec Department of Agriculture. His appointment dates from May 1.

DIED: Horace Aldridge Craig, 68, one-time deputy minister of agriculture in Alberta for 28 years, and operator of a 25-acre turkey farm near Edmonton since 1938; on Thursday, May 4.

THE Alberta Department of Agriculture estimates the value of Alberta farm production in 1949 at \$457,225,000, about \$118 million less than in 1948. On the other hand, farm cash income in 1949 was slightly more, at \$463,578,000, than in 1948, at \$456,043,000. A decrease in field crops production largely accounted for the decrease in total production, while the Wheat Board payments brought up cash income from grain, seeds and hay. An estimated 20,386,100 acres were under cultivation last year.

THE Argentine is making a bid for the British bacon market. Recently a trial shipment of 200 sides was received in London for inspection. Kenya, a British African colony, has also made its first trial consignment of frozen bacon sides to Britain.

AT the Ontario Agricultural College, Guelph, this summer, the first short course in Canadian history will be offered to rural clergymen, who will receive instruction in soil conservation, field crops, livestock management, plant diseases, and other practical farm topics.

THE corrected figure for per capita consumption of meat in Canada in 1949 is 138.6 pounds as compared with 135.3 pounds in 1948.

IT has been estimated that Manitoba's 400,000 tourists annually consume, at minimum U.S. and Canadian health requirements, the following quantities of specific foods: 935,000 quarts of milk; 635,000 pounds of grain products (bread and cereals), 1,750,000 eggs, 175,000 pounds of butter, 350,000 pounds of sugar and syrup, and 1,050,000 pounds of meat.

IN preparation for the expected grasshopper infestation this summer, the Saskatchewan Department of Agriculture has ordered sufficient poison for spray and bait to apply on one million acres of land. Aldrin, a new chemical, will cost 30 cents per acre this year as compared with 70 cents per acre last year for chlordane.

THE value of forage crops produced in 1949 was more than one-third lower than in 1948. Nearly all provinces and nearly all seed crops showed declines. Among the provinces, Alberta dropped most seriously from \$9,444,000 to \$4,396,000. The value of Canadian alfalfa seed produced dropped from \$8.5 million to \$3.5 million.

DURING 1949, 52,703 additional acres of provincial, municipal and private land were added to P.F.R.A. community pastures. During the year two new pastures were developed, 10 existing pastures enlarged and seven reduced in size.

SASKATCHEWAN poultry producers will probably vote this fall on the formation of a producers' marketing board.

MEMBERSHIP in the British Friesian Cattle Society increased by 1,311 to 8,829 members in 1949. It has been estimated that British Friesian breeders are responsible, through the influence of purebred animals, for about 40 per cent of the milk the British housewife receives on the doorstep every morning.

LARGELY due to drought, the sheep population of Australia has fluctuated widely during the last 88 years, as follows: 1860—20 million, 1891—106 million, 1902—54 million, 1941—125 million, 1948—108 million. In 1949, 46.36 per cent of Australian sheep were located in New South Wales.

THE first four months of 1950, 34.9 million pounds of margarine were manufactured in Canada as compared with 19 million pounds a year ago. Last year a total of 73.9 million pounds were produced.

DURING the year 1949-50 there were 44,154 cattle tested in Saskatchewan for Brucellosis or Bang's disease, in 5,987 herds. The largest number tested was in the eastern and central areas of the province. Of all herds tested, 7.96 per cent were found to be infected.

DR. ROBERT NEWTON, 61, president of the University of Alberta since 1941, will retire August 31. A native of Montreal and a graduate of McGill University, with postgraduate degrees from the University of Minnesota and honorary doctorates from the Universities of Manitoba, Saskatchewan, Alberta and Cambridge, Dr. Newton is also a veteran of World War I (Military Cross), and was formerly head of the Field Husbandry Department, University of Alberta, and Director, Division of Biology and Agriculture, National Research Council.

RATS are now within 15 miles of the Alberta boundary and are moving westward at a rate of about 12 miles per year. It is reported that rats are already well established west of the Battleford area, north of and around the Laporte and Eaton areas, and in the Maple Creek area.

RECENTLY, in Lethbridge, five persons prominent in the development of the beet sugar industry in southern Alberta were honored by the Alberta Sugar Beet Growers' Association: Senator W. A. Buchanan, Lethbridge; Dr. H. W. Fairfield, for 40 years superintendent of the Dominion Experimental Station, Lethbridge; Arthur Dahl, Cardston, first president of the Association; Louis Brandley, Raymond and V. R. McMullen, Lethbridge, both early presidents of the Alberta Sugar Beet Growers' Association.

SINCE the war, price support of potatoes in the United States has cost close to \$500 million, and there is reported to be an even chance that potatoes will not be supported next year.

NEW YORK CITY'S rainmaking scientist, Dr. Howell, who is paid \$100 per day, has been offered \$200 per day to stop his activities. Operators of an amusement park have not had a single day of sunny weather since Dr. Howell began.

How much does a weed Cost?



Depends on where it is. Weeds in your wheat or other crops can cost you plenty. They steal moisture and food from the soil, choking out good crops. All you need for proof are the higher yields that farmers have obtained when they controlled weeds with Dow Weed Killers.

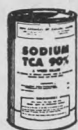
In wheat and other small grains, a lot of Prairie farmers find that Esteron 44 and Esteron Dust No. 5 are the most effective, economical weed killers they can buy. These ester formulations of 2,4-D knock out tough weeds like Canada thistle, Russian thistle and ragweed. Thousands of acres

yield better harvests because they are sprayed with Dow Weed Killers.

Your dealer will be glad to tell you about the complete line of Dow Weed Killers... a weed killer for nearly every farm purpose. Ask about 2-4 Dow Weed Killer, Formula 40 — the finest amine salt weed killer you can buy. Formula 40 is the answer for most farm weed problems. Find out about Esteron Brush Killer — take care of nearly any kind of brush problems. In fact, where weeds or brush are problems, look to Dow's complete line of dependable weed killers.

FIELD NOTES

Dow Sodium TCA 90% Controls Grasses



This new grass killer offers an effective means of spot-treating local infestations of certain noxious grasses in crop lands and pastures as well as overall treatment of grasses along roadsides, irrigation and drainage ditches, fence rows and right-of-ways. It has been tested and found effective in controlling perennial grasses such as quack (couch or twitch) and Canada Blue. At lower dosages, it will suppress both annual and perennial grasses such as crabgrass, foxtail, chess, bluegrass and redtop, leaving a grass cover where desired.

Dowfume MC-2 Is New Soil Fumigant

This new soil fumigant (a Methyl Bromide-Chloropicrin mixture) when applied under a gas-proof cover, has given excellent control of weed and grass seeds, roots and stolons, nematodes, white grubs, wireworms and certain soil diseases. It is useful for treating seed beds, propagating beds, hot beds, cold frames, greenhouse ground beds, potting soils, compost, manure-piles and local areas where trees and shrubs are to be planted. At higher dosages, control of certain fungus organisms is assured.

Dowklor Offers Improved Insect Control

Dowklor Chlordane Formulations have proved most effective in controlling many varieties of insect pests infesting crop lands. They are triple-action insecticides, killing insects by direct action, by stomach poisoning, and as a fumigant vapor rising from the spray or dust deposits of treated surfaces. Dowklor formulations do not repel or scatter the insects, nor are they dependent on their feeding habits. They have successfully controlled grasshoppers, army worms, alfalfa weevils and spittle bugs. Available either as a dust or spray.

Further information on any of these products is available at your Dow dealer or write direct to Dow Chemical of Canada, Limited, 204 Richmond St. West, Toronto 1, Canada.

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Esteron 44. A superior ester weed killer.

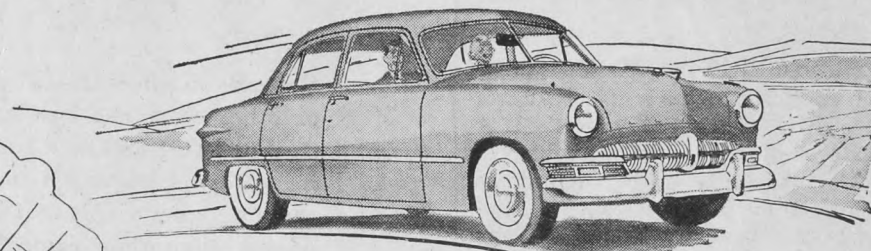


Esteron Dust No. 5, an effective ester dust formulation.

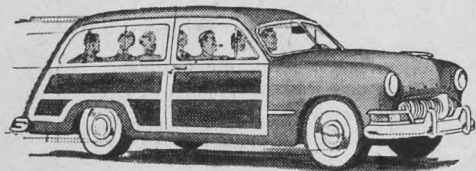


2-4 Dow Weed Killer, formula 40, a proved amine type weed killer.

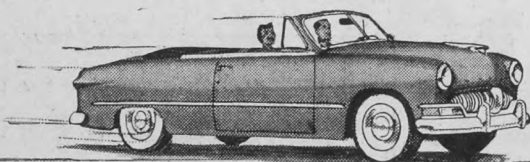
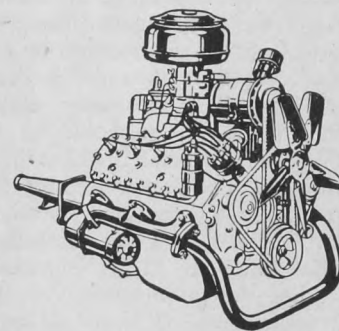




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Take the wheel and feel that eager, responsive 8-cylinder power. Enjoy the relaxing, deep-cushioned comfort and the beautiful interior finish. See how smoothly the Meteor pulls away—how easily it stays in front. How it hugs the road, takes the curves—stops swiftly and safely at a touch of the brake. Take the wheel—and you'll believe as thousands of Meteor owners do that there is no finer car value anywhere.



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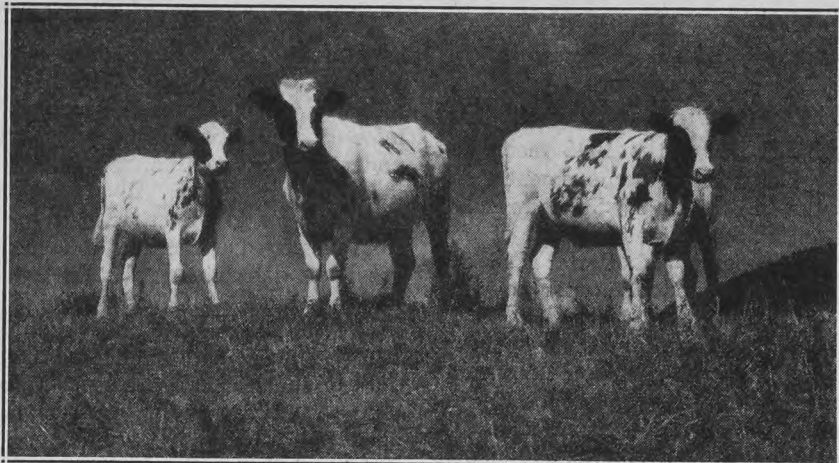
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LIVESTOCK



"Something interesting down there!" It was also a good opportunity for a picture.

Plain Talk About Feed

THE Manitoba Department of Agriculture recently gave forth some plain talk to dairymen on the question of reserve feed supplies. What was intended for dairymen in the Winnipeg milkshed will apply equally to many other dairymen and to owners of farm herds of beef cattle. The following paragraphs are quoted:

"There were a number of dairymen in the Winnipeg milkshed that had enough hay this spring. There were some that even had hay for sale. The rest of the dairymen were short of hay. The price of hay was high last fall and much higher this spring. The quality of hay in most cases is poor. There is just as much wild hay fed as all other grasses combined.

"Our first reaction is to blame the drought last summer for the shortage of hay. But all these farms were subject to the same weather conditions. The causes are much deeper than that. Some of the dairymen with enough hay were prepared for the variations in weather. The land is capable of growing a variety of grasses. There are grasses that can withstand considerable drought (Crested Wheat, Slender Wheat, Brome). There are grasses that can withstand flooding (Red Top, Reed Canary, Meadow Fescue). There are grasses that withstand both flooding in spring and drought in the summer (Red Top). A plant like alfalfa can draw water from the water table because of its long roots. There are a few grasses that can withstand drought because of extensive root systems able to draw moisture from the sub-soil (Crested Wheat). The dairyman should know his soil and grow grasses accordingly.

"The price of grain has been high and much of the land used for grass previously has been plowed and sown into grain. The dairymen have been trying to produce grass on smaller acreage and on poorer land. Poor land cannot produce good hay, just as it is incapable of producing grain. The manure that should be distributed on this land is often rotting behind the barn. One dry summer and many dairymen are left without enough hay. With the use of the combine, straw is not available in case of emergency unless balers are used.

"Most of this could have been avoided even as late as last June, when every dairyman knew that his hay crop would not carry his livestock all winter. There are the millets and Sudan grass that can be sown as emergency crops and harvested in a couple of months. Corn requires very

little moisture and may be grown on land that is summerfallowed at the same time. Corn silage is excellent feed for dairy cattle. Let us hope that we will never again be caught in the same predicament as in the spring of 1950."

Vaccinate The Calves

CATTLE vaccinated, as calves, as a preventive against Brucellosis (Bang's disease, or contagious abortion) are commanding higher prices because they will not contaminate other herds. If your herd is clean, vaccination is good insurance. According to Dr. E. E. Ballantyne, Director of Veterinary Services, Alberta Department of Agriculture, calfhood vaccination is 97 per cent effective in preventing losses due to Bang's disease.

Calves should be vaccinated between four and eight months of age. About 21,000 calves were vaccinated last year in Alberta, which is not nearly enough, because this disease can cause undulant fever in human beings. Bang's disease can be eradicated from any province, but the first step is calfhood vaccination. The second is that infected cattle should be sold only for slaughter and not peddled to other farmers.

Baby Beef

TWO years ago steer calves were weaned on a self-feeder at the Experimental Station, Scott, Sask. They gained 2.6 pounds per head, for a total of 375 pounds, during 144 days after weaning.

The calves were started with whole oats or oat chop in a self-feeder before weaning, and self-fed until they were approximately a year old. During the early part of the summer a mixed pasture was available but, because of drought, hay was provided before the end of the summer was reached.

This method is recommended by E. Van Nice of the Scott Station, especially when labor is scarce or hired help is used, or if experience in hand-feeding is lacking. Mr. Van Nice points out that after the calves are well started, barley chop may make up 50 per cent of the chop mixture, along with five per cent of linseed meal added gradually. To avoid putting calves off their feed, any change in the mixture, whether in quantity or character, should be made gradually. If calves have not been accustomed to green feeding, no more than two pounds per head per day is advisable at first. Low grade wheat is suitable if lower priced than barley.



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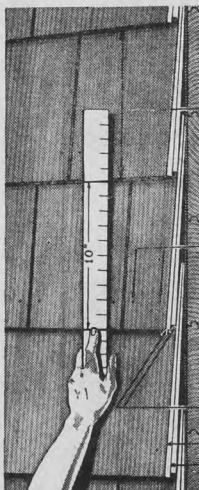
Red Cedar Shingles withstand the rigours of time and all kinds of weather. Red Cedar Shingles give dependable service everywhere they're used.

Building costs are actually lower when Certigrade Red Cedar Shingles are used. Red Cedar contains a natural preservative oil which remains in the shingles throughout its span of service.

Natural insulation properties of Western Red Cedar, make Certigrade Shingles a must where there are extremes of temperature. Buildings are cooler in summer—warmer in winter.

Red Cedar Shingles are more attractive, often copied. They lend to farms and homes an atmosphere which cannot be duplicated by any other product.

For service...value...rugged dependability...insist on Certigrade Red Cedar Shingles



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10" for 16" Shingles.
11" for 18" Shingles.
14" for 24" Shingles.

Each under course shingle may be held in place with one 3d nail.

Two rust-resistant small headed 5d nails per shingle for Outer Course applies 1" to 2" above butt-line and 3/4" from edges.

Outer Course 1/2" lower than Under Course.

Use shiplap as straight edge for applying both courses.

Red Label (No. 2) Shingle Outer Course.

No. 3 Shingle Under Course.

* If No. 1 shingles are used for Outer Course the exposure may be:

12" for 16" shingles
14" for 18" shingles
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Colors of "Certigrade" shingles on bundles are No. 1 (Blue), Red Label (No. 2) (Red), No. 3 (Black).

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Penicillin "BOO-JEES"



At the first sign of mastitis, insert one "Boo-Jee" in the teat canal. This will maintain a concentration of penicillin in the quarter for at least 12 hours, when another may be inserted if necessary.

Ayerst bougies have a special base which is freely soluble in milk and does not depend on temperature to dissolve. Penicillin "Boo-Jees" are non-irritating, safe to use and will not discolor the milk. They retain their potency without refrigeration. Get them from your veterinarian or druggist now and always keep a package on hand.

10,000 Units: Vial of 12—\$2.30
(also in 25's)

25,000 Units: Vial of 6—\$2.00
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"MYPENS" (streptomycin with penicillin) Vial of 6—\$2.00

If you prefer to use an ointment, ask for "Cillenta" Veterinary or "Myphen" Ointment.



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"How to Increase Profits
on the Farm"



THE ALBERTA LINSEED OIL CO.
LIMITED
MEDICINE HAT, ALTA.

Neither should be ground too finely.

If this method of self-feeding is adopted, it is important to have the chop mixture, along with salt and water, available at all times.

High Production Lowers Cost

A STUDY of the 1948 records of Dairy Herd Improvement Associations in the United States reveals a clear indication that the cost of producing a pound of butterfat is sharply reduced as production per cow per year increases.

Where butterfat production per cow was 100 pounds per year, the income over feed costs was only \$16, and the cost of producing a pound of butterfat, \$1.11. Cows averaging 350 pounds of butterfat returned \$223 over the cost of feed, so that the cost of producing a pound of butterfat was reduced to 47 cents. Cows producing 600 pounds fat per year, produced butterfat at only 41 cents per pound.

Dehorn Market Cattle

A GREAT deal has been said and written, and much effort expended, to reduce the number of horns appearing on market cattle in western Canada. Most, if not all, of the provinces have established horned cattle penalties, generally \$1.00 per head, in an endeavor to discourage this practice and to reduce the amount of damage caused by horns in stables, feed lots, trucks and stockyards.

At the last session of the Manitoba Legislature, the market penalty against horned cattle was increased to \$2.00 per head effective June 1 this year, for all market cattle over 400 pounds in weight.

The Department describes horns as a handicap to the producer. They increase production costs, reduce sale value and prevent cattle on feed from making pasture gains. A stick of caustic potash can be obtained from almost any drug store for use on spring-born calves whose horns can be killed in the bud. Older cattle can be dehorned with a special dehorner. All Manitoba agricultural representatives have a pair of dehorners which can be borrowed to make sure that no cattle weighing over 400 pounds are marketed with their horns.

Transmitting T.B.

EVERY livestock owner is aware of the fact that for more than a quarter of a century, strong efforts have been made by enterprising breeders, livestock associations and our departments of agriculture to control the spread of tuberculosis. For a long time it has been known that human beings could get tuberculosis from infected cattle, not only by direct contact, but from eating improperly cooked meat, milk and other dairy products which are contaminated.

It is not so well known that a tuberculous person can also infect cattle. The fact that tuberculosis in cattle is being eliminated much more rapidly than tuberculosis in human beings means that humans are safer now from the cow, than the cow is from human beings.

For nearly sixty years it has been recognized that there are three distinct strains of tuberculosis germs: human, bovine (cattle) and avian (bird or fowl). Each of these strains likes its own natural accommodation best, but the bovine germ will thrive almost

as well when introduced into the human system, while the human germ will grow to a limited extent in cattle.

Very recently, animal pathologists associated with Science Service in the Federal Department of Agriculture found 25 out of 263 crows which were infected with tuberculosis, and which under certain conditions might infect farm poultry flocks. All the crows examined up to that time had come from western Ontario, and it had not yet been determined whether crows in other parts of Canada were also subject to tuberculosis. It was interesting to learn that the infected crows did not show any of the usual symptoms of tuberculosis, namely, an emaciated or run-down condition.

Among the infected crows, seven different strains of tubercle bacilli were isolated and Dr. Charles A. Mitchell, Dominion Animal Pathologist, reported that these did not conform to the pattern of the organism usually found in fowl. Varying results were secured when these organisms from the crows were injected into chickens, rabbits and guinea pigs.

It is not only important that the tuberculin testing of cattle should be continued and that all cattle be maintained as free of tuberculosis as possible, but it is necessary that human beings caring for cattle should also be free of the disease. There is a record in New York state of a dairyman who presumably contracted tuberculosis from some of his cattle in 1929. He was a milk peddler, whose own herd was clean, but he bought some milk from an untested herd and fed the skim milk to his calves. Ultimately his entire herd reacted and was lost. During the next 17 years he purchased and built up two additional herds, each of which was lost by reaction to tuberculosis, before it was discovered that he, himself, had been a patient in a tuberculosis sanatorium, having contracted the disease from his first infected herd.

Foot Rot

MUDDY barnyards or waterholes are very likely to cause some cases of foot rot in cattle. This year in particular, when large areas in Manitoba have been flooded for a long time, it would be surprising if some cases of foot rot have not developed.

It may be caused by several organisms, but most cases are said to be caused by actinomyces necrothorus. Unless care is taken, the results may be very serious. The milk production of dairy cows nearly always drops off sharply. The disease is very painful and cattle may become weak, lose weight and occasionally die.

Examination should be made when the first lameness is evident. Swelling will be found around the coronet, or above the hoof. In time this swelling will abscess and exude pus. If unchecked, the foot and leg will become greatly enlarged and the bone and hoof become permanently damaged. During recent years it has been possible to apply a highly satisfactory cure by the use of sulfapyridine or sulfamethazine. These drugs, however, are dangerous and are best administered by a veterinarian. Reports indicate that in nearly all cases expert use of these drugs eliminates necessity for further treatment, other than ordinary care and sanitation.

First-aid treatment is to get the affected animal on dry ground, or in

a dry stall in the barn where the feet may be examined, trimmed and washed. Foot rot seems to be a particularly likely result in cases where gravel and cinders have been hauled in to relieve the effects of muddy and soggy yards. Combination of prolonged wetting and gravel or cinders leads to infection. Very often, if not generally, development of foot rot follows some other injury to the foot, such as a splintered hoof or a cut.

Pasture For Pigs

PASTURE not only provides part of the protein, minerals and vitamins required for healthy pigs, but it also offers more sanitary conditions than are to be found in pens and yards. Alfalfa and rape are highly recommended; and if alfalfa is available both the breeding stock and the growing pigs should have access to it during the summer months. Allow about one-quarter acre of pasture for each brood sow. Sweet clover, alsaswede, grass or mixed cereal pastures are suitable if alfalfa is not available. Cereal pastures should not be used until growth has reached a height of five or six inches. Mixtures of wheat, oats and barley are satisfactory.

For pigs on pasture, plenty of water and shade are desirable. White pigs blister easily in the sun and therefore need some protection, either in the form of trees, brush or colony houses. If they do blister, they can be treated successfully with almost any oil.

Breed The Best Mares

DESPITE the fact that there has been a steady and persistent reduction in the horse population of Canada over a period of several years, it still appears that it will be profitable to select the best mares for breeding.

There are now comparatively few good, well-broken young horses available and the demand at western horse sales this year was at least fair for horses of this type. Notwithstanding the tremendous strides made by mechanization during recent years, especially on prairie farms, there is likely to be a market for many years yet for a limited number of good farm horses. Private breeders still have a number of good stallions in service, and there are also good horses available for breeding at many of the experimental farms and the universities.

Calves Without Milk

AT the University of Wisconsin, calves have been raised that never had tasted milk, not even colostrum, or first milk. From birth on they were fed a synthetic milk, developed by research workers at the university from such ingredients as fruit pectin, lecithin secured from soybeans, and cotton-seed oil.

It is reported that Holstein calves gained a pound or more per day on the synthetic milk. Without exception, the Guernsey calves became ill between one and three days after birth, but recovered after streptomycin treatment.

Before the synthetic products could be used, it was necessary to work out very complicated balances of the nutrient ingredients. They found that it was necessary to have the calcium and sodium in exactly the right proportion, before the milk was digestible by the young calves.

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| <input type="checkbox"/> 4-5 plow "LA" tractor | <input type="checkbox"/> Grain drills |

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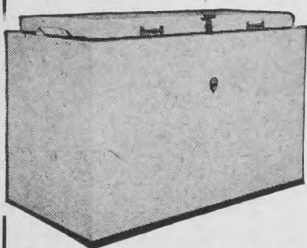
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Fertility Balance

IT is a fact of which residents in western Canada are very proud, that the high grade, hard, red, spring wheat produced in the prairie provinces has outranked all other wheat in the world market since wheat was first exported from western Canada.

Two factors are responsible for this very favorable reputation. These, according to Dr. J. L. Doughty, Soil Research Laboratory, Swift Current, are: (1) The fertility balance of prairie soils, particularly in the brown soil or short grass prairie area; and (2) the prevailing climatic conditions which include a low rainfall from which a high protein content wheat tends to result.

The soils in the brown soil zone were developed on what is called glacial drift. These are the deposits of the glaciers which once rested on the prairie provinces thousands of years ago. This drift, or deposit, consisted of a very wide variety of rock, so that these brown soils contain a satisfactory supply of most minerals required for plant growth. The surface five inches, according to Dr. Doughty, contains approximately 0.2 per cent nitrogen, 0.05 per cent phosphorus and 1.5 per cent potassium. The fact that this indicates four times as much nitrogen as phosphorus and 30 times as much potassium is the reason why the well-known 11-48-0 fertilizer mixture is so commonly used.

Dr. Doughty has commented very interestingly on the importance of maintaining the balance of fertility in this area, which is often referred to as the drought area:

"For hundreds of years these soils produced grass. Each year the plant nutrients were brought up from the soil, built into plant tissue and returned to the soil when the plant decayed. There was little or no loss by leaching, for the precipitation was seldom sufficient to penetrate much beyond the root zone. The repetition of the cycle of growth and decay over countless years, built up a good supply of readily available plant nutrients, with a more or less favorable fertility balance. When these soils were put under cultivation, they produced good crops of high quality, under favorable

moisture conditions. The quality of the product has been maintained throughout the years and as the average yield in 1942 was the highest on record, it can be assumed that productivity has not materially decreased.

"The average yield of wheat for the area concerned is approximately 13 bushels, which means an annual loss of 19 pounds of nitrogen, 3.3 pounds of phosphorus and 3.4 pounds of potassium per acre, if the grain is sold off the farm. Commercial fertilizers are not in general use, for results to date have not indicated that either nitrogen or phosphorus was lacking. However, the annual loss from the land of even 3.3 pounds of phosphorus per acre will eventually have an effect and the supply will have to be replenished. Periodic application of fertilizers to experimental areas should be made to determine if the fertility balance is being maintained.

"There has been an approximate loss of 20 per cent of nitrogen and organic matter from the prairie soils since they were brought under cultivation. The organic matter of the soil is subject to constant decomposition, which means an annual loss of this valuable constituent. The return of all crop residue to the land will reduce, but may not fully compensate for the annual loss. The time may not be far distant when other methods of supplementing the supply of organic matter are necessary. This may mean seeding the land to grasses and legumes at periodic intervals for the improvement of the chemical composition and physical condition of the soil. Only by maintaining the fertility balance and proper physical condition can crops of high quality be produced."

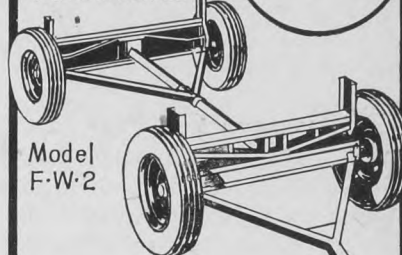
The Machine Is Not All

MACHINERY does not produce. It is a means of production and if the production is to be worthwhile and efficient, machines must be used to the best advantage, or they can be a burden against the over-all efficiency of a project. Cattle can be raised and marketed without machinery. Only if the right amounts of machinery are used and used in the proper manner

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can they contribute to the increased efficiency of our "mechanized farming." No machine guarantees that a good job will be done, but most machines can do a good job.

Management and operational technique determine the value of machines used in agricultural production. Management will assess the value of the machines in replacing labor—what types of labor are to be replaced and to what extent the replacement will be carried out. Operational skill must be of the highest order to utilize the advantage to be gained by the machines. This includes timeliness of use, maintenance of the equipment to ensure that it is capable of doing good work, and adjustment of the machine to suit the requirements of the job.

Field observations were made by a number of technical agriculturists in the summer of 1949. They indicated that many operators, even those who were classed as better farmers, were not conditioning their machinery to do good work, or were not making the proper adjustments to suit the field, or the job at hand. The operators concluded that tillage operations could not be assessed from the tractor seat or from the road allowance. Their own findings are significant.

One new cultivator was heavily built and capable of doing excellent work. The hitch had been adjusted for height to carry the frame of the machine horizontally and give equal penetration to all shovels. However, the shovels had been clamped to their standards with the points digging badly and the wings tilting up at a sharp angle. The operator took the new machine into a 160-acre summer-fallow field. Growth was not heavy, but some of the perennials were strongly developed. He set the machine to penetrate about 5½ inches at the points of the shovels. From the tractor seat, or the road, it appeared that he was doing an excellent job of weed killing—certainly he was doing a lot of ridging and was using a lot of power.

The operator and the passers-by were quite amazed when they examined the field closely. The 160-acre piece looked black. It was found, though, that only a few of the hardy thistles had been cut off by the shovels. Many had been partially buried by loose, black earth, but were quite able to carry on vigorous growth to the point of producing a good crop of seed. With the use of a flat-nosed spade the loose dirt was scraped away to reveal the surface of the harder ground where the shovels had penetrated. This showed that the points of the shovels had gouged out grooves about 5½ inches deep and that these were spaced at regular intervals across the field. Between the grooves were ridges shaped like low-pitched gable roofs, coming to a peak at the center which was at the former level of the surface. In the ridges few perennials had been damaged. The nice-looking job of cultivation had been wasted effort and cost. Changing the pitch of the shovels reduced the power requirements of the machine and enabled it to do the job it was designed to do.

Similar cases involving other farm machines can be cited. Many diskers and one-ways are set to cut at too wide an angle. In that position the blades leave ridges of unworked land between them. This scalloping effect can be seen on many farms. The same machines can fail to cut all the weeds

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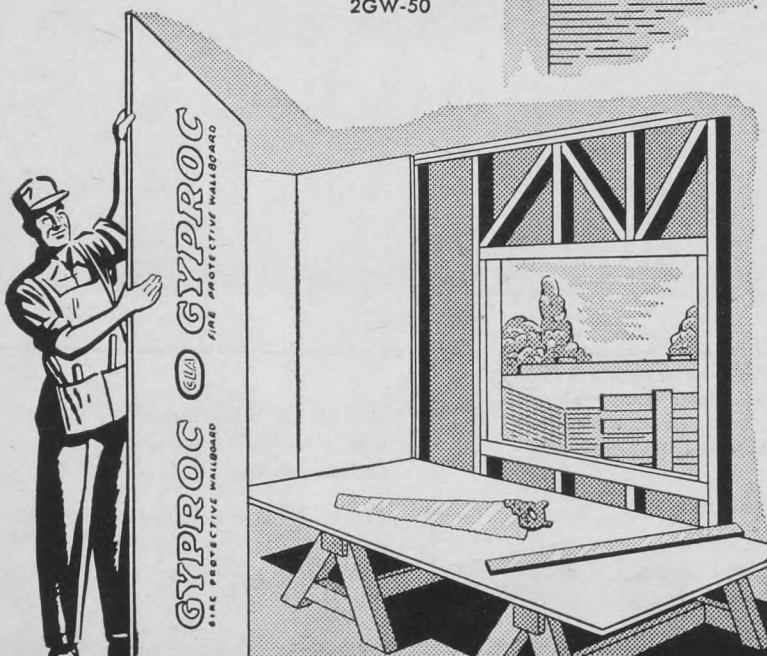
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if the blades are too dull, if the hitch point is too high, or if the rear rudder wheel is not made to carry sufficient weight to hold it in place. Close examination of the work at frequent intervals will indicate whether or not the desired effect is being achieved.

Machinery alone cannot produce and the best machines are not guarantees that good work will be done. Machinery is an aid to the operator, permitting him to cover more work and to do it more efficiently if it is properly used.

Pasture Per Acre

VERY well managed pastures in areas of high rainfall or in areas under irrigation can be made to carry better than one head of mature cattle per acre. On the other hand, native grass pastures in extremely dry or unwatered areas may require 60 acres per head. These represent extremes in carrying capacity, which is the common measure of pasture yield.

In provinces such as Ontario and British Columbia, where land values are higher and acres are used more intensively, as a rule, than in the prairie provinces, pastures are often very well managed and very high yielding. In the prairie provinces, however, we have not yet paid sufficient attention to developing carrying capacity of pastures even in areas where livestock does well and forage crops can be grown successfully for them.

Great improvement, for example, can be made in the carrying capacity of Manitoba pastures. As a province, Manitoba, though smaller than either Saskatchewan or Alberta, has a much better opportunity of developing the type of farming in which livestock plays an important part and in which well managed pastures could add very substantially to net farm income. The province has about five million acres in pasture, and for the most part poor pasture management is prevalent.

The amount of livestock which can be carried on 10 acres will vary of course with the kinds of grasses and legumes seeded, but to a very large extent this will depend on management. This involves a number of very important practices, among which is the accepted fact that seeded pastures should not be grazed the same year they are sown. Where there is no nurse crop and where growth is heavy, or weeds are plentiful, clipping the pasture is advisable. Needless to say, stooks on new pasture or hay cocks on older fields should be removed as soon as possible to avoid smothering.

Early spring grazing on pastures where the land is still soft is harmful. On the other hand, grazing should not be begun so late that the tall species will smother the lower-growing types. To maintain a high-quality pasture, growth should be kept down to about six inches in height and the number of animals per acre either increased, if necessary, or the pasture clipped with a mower. This does not mean cutting close to the ground. Pasture plants also need to enter the winter with an adequate food supply so that they may withstand winter conditions and begin growth vigorously in the spring. This means the avoidance of late fall pasturing so that the pasture crop may attain a fair top growth before winter.

Many good pasture managers prefer the use of electric fences to divide fields into smaller areas so that rotational grazing may be practised.

Where this is done very intensively on high-priced dairy land and especially under irrigation, a small area from which the cattle have just been moved is sometimes harrowed, clipped, fertilized and irrigated. For ordinary farm pastures a top dressing on the soil of about five tons per acre of barnyard manure is very desirable. This should be followed in the spring by harrowing to spread the manure thinly and evenly. Some application of commercial fertilizers will also be profitable as a rule. The fertilizer will increase the nutritive value and the palatability of the grasses, as well as improve the yield, according to trials with Manitoba pastures.

The Manitoba fertilizer recommendations are to use from 50 to 75 pounds per acre of 11-48-0 fertilizer for pastures that are either alfalfa or alfalfa-brome mixtures. For those which are predominantly grass, from 75 to 100 pounds per acre of 16-20-0 fertilizer is recommended, because of the higher nitrogen content of this fertilizer.

Soil Fertility And Yields

THE fact that in certain areas crop rotations have not proved particularly advantageous in increasing yield per acre, has contributed to much carelessness in other areas. The important "production" capital on most farms is very largely tied up in land, and more particularly in those soil characteristics which contribute to fertility and satisfactory yields. The problem of improving or maintaining the fertility of any soil is consequently very important, and it is for this reason that the various systems of crop rotation have been developed.

Some types of crop rotation are suitable for one district, and some for another. The object of all is the same. In commercial farming areas, widely separated extremes are to be found. In certain parts of southern Alberta, where the simplest rotation of wheat and fallow has been followed for many years, tests of this system against others have shown that it has held up well. On the other hand, in farming areas where annual precipitation is high, where cash crops are intensively grown, sometimes accompanied by extremely large applications of commercial fertilizer, rotations including leguminous or other forage crops become necessary in order to maintain the supply of organic material and humus in the soil. In mixed farming areas where farm land values are good and livestock production is an important part of diversified practice, rotations are desirable for an additional reason. They not only make possible the maintenance of soil fertility resulting from the use of forage crops for the livestock, but from the presence of the livestock itself. However, the fact is that in whatever area farming may be carried on and under whatever conditions of rainfall and climate, the maintenance of soil fertility is of primary importance for a successful and permanent farming community.

Short rotations are required on the open prairies where both weed control and moisture conservation are primary considerations. Under such conditions also, either strip farming or the maintenance of a good trash cover is necessary in order to prevent soil drifting. Even under these conditions, it is highly advisable to seed down some of the land periodically to maintain the fibre or organic content.

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Spare-Time Ideas For June

Ideas that may save many hours when time is valuable

Calf Feeding

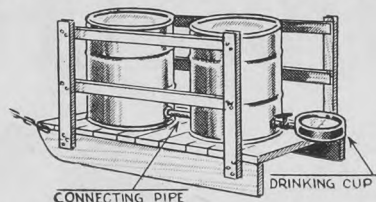
ROPE TO CEILING



To eliminate the tedious chore of holding the pail for calves, suspend the pail by a rope from the ceiling. A snap on the end of the rope makes it easy to hang or remove the pail. When the calves have finished drinking they will play with the pails for a while; this eliminates a lot of the molesting they commonly inflict on each other.—H.H.

Movable Hog Waterer

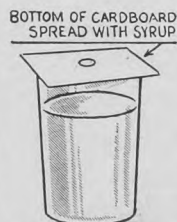
I built this waterer because the hog pens were about one-half mile from the house and well. The runners and cross pieces were made of two-by-six-inch planking and the cage of one-inch stuff. All were heavily creosoted



after being cut to size. The pipes connecting the barrels are 3/4-inch, with a shut-off valve which can be closed if necessary. The drinking cup is commercially made and was purchased in a local hardware store. It allows the hogs to drink all the water they want without wasting it. The barrels can be of any size but will need covers to prevent the water from slopping out during transportation.—A.W.P.

Fly Catcher

To make a small fly catcher, cut a piece of cardboard about five inches square. Make a hole in the center about the size of a nickel. Spread some sweets (syrup preferred) around the hole and place the sheet upside down over a glass of soapy water. When some flies have accumulated on the underside of the cardboard, tap it lightly, knocking them into the water.—J.A.J.



Gasoline Pail

I made this can for use in filling the tractor fuel tank but find that it is just as useful for filling up the car. It is handier than a funnel and is less likely to cause spilling or contamination from dirt. I used a five-gallon can with a screw top, cut a hole near the side and soldered on a 14-inch piece of flexible hose. The hose should be at least one inch in diameter.—H.N.

FLEXIBLE HOSE SOLDERED TO CAP OF FUEL CAN



Poultry Water Stand

A stand to hold the poultry water pail can be made from an old harrow cart. Cut out the hub and bend four of the spokes upward around the pail. This will prevent it from tipping over.—J.C.



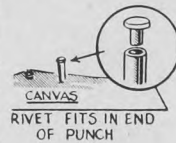
Sow Trainer

Some sows and hogs seem to lack respect for electric fences. Once they have formed the habit of going through the fences, no changes in the current or type of fence used seem to have any effect. I made a halter out of car tire chains and left one cross chain dragging. It makes good contact with the fence wire and the sow gets an extra shock which she soon learns to keep away from.—W.W.L.



Canvas Repair Tool

It only takes a few minutes to make a hollow canvas awl from medium-weight sheet metal but it saves a lot of time in placing rivets. When several layers of canvas are to be riveted together, insert the rivet in the hollow end of the punch. Push the tool through the material and without even turning the canvas over, the rivet will take its place for the burr. Tubular punches are sometimes available factory-made, but homemade punches can be just as useful.—J.M.



Extra Car Keys

To save the price of a window or a bill from the locksmith, solder an extra key inside the hubcap of the car. A small drop on the end of the key will hold it and permit easy removal of the key by bending it up with the fingers. Be sure the cap is put back on tightly. Next time the keys are locked in the car an "in" will be provided without delay.—S.B.P.



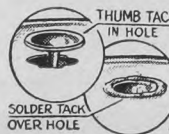
Saw Leg Board

Most tilt tables on saws present a sharp edge against which the operator is expected to push with his leg. No wonder, then, that the man who feeds the saw soon complains of a sore spot on his leg. The obstacle can be removed by using a few bolts, a pair of hinges and a one-inch board about 10 inches long and eight inches wide. Fasten the strap ends of the hinges to the board, placing them near the ends. Bolt the butts to the frame of the saw table to hold the top of the board from two to three inches above the top of the table. It can be located along the table to suit the man who is feeding the saw, but will not be in the way of the logs.—M.E.P.



Soldering Patches

Very small holes in pails or cans can be filled with solder. When the holes are a bit bigger a patch must be used; the simplest patch to obtain and use is the head of a thumb tack. The point of the tack holds the patch in place while the solder is being applied. If properly cleaned with acid, solder will stick readily to both sides of the tack.—L.A.W.



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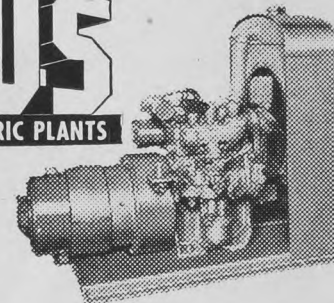
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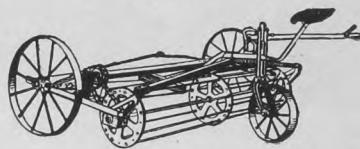
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Bloat

Continued from page 13

appear favorable for producing bloat. Such circumstances suggest that selective grazing, or a factor not now known to be associated with bloat, may be responsible.

Frost, dew or rain may influence the incidence of bloat, but are considered to be less important than the kind of feed and stage of its growth. The presence of moisture on pasture forage may be a factor in increasing feed consumption, and in this way may contribute to bloat.

A NUMBER of bloat-preventive measures have been adopted from time to time. Some have met with good success, while others have been of little value. The Committee on Animal Health of the National Research Council of the United States of America recommend the following preventive measures as the ones which have been adequately proven by experiment and practice.

1. Mixtures of grasses with legumes cause much less bloat than legumes alone. This method will only be effective when the proper proportion of grasses and legumes is maintained by good cultural and pasture management practices. Practical tests have shown that bloat rarely occurs if grasses make up at least 50 per cent of the mixture. Abnormal weather conditions, such as a period of drought followed by heavy rains, may temporarily increase the proportion of legume in the mixture. When this occurs special precautionary measures should be taken until the dangerous growth period is past. These measures would involve such practices as feeding hay in the pasture field, feeding hay prior to turning out to pasture, or temporarily removing the stock to a grass pasture.

2. Don't pasture pure stands of alfalfa or clover until after they have reached the bloom stage, unless hay is provided as a supplementary feed. Mature legumes are usually sufficiently coarse to cause belching to occur normally. However, since legumes vary in rapidity of growth and in coarseness, some danger from bloat on legumes in the bloom stage may exist, especially if the growth is fine and leafy.

3. Supplementary feeding of hay in the barn or feed lot at night will reduce the occurrence of bloat on legume pasture. This practice is of greatest value when cattle or sheep are being put on a legume pasture for the first time. If the animals are partially filled up prior to putting out to

pasture, they are not as likely to gorge themselves. In addition, the roughage eaten helps to stimulate belching. The effectiveness of a hay presumably depends upon two factors: It must be palatable in order that enough is eaten; and it must be fairly coarse, so that normal ruminal activity is produced. Experiments conducted with the feeding of Sudan hay have shown it to be the most effective for this purpose. Alfalfa hay was less effective, but still of definite value.

4. Feeding hay in the pasture will also reduce the incidence of bloat. Free access to hay or other roughage can be provided by locating feed racks in the pasture field or by having a hay-stack available for the stock to run to. Experiments have indicated that cows will consume sufficient Sudan hay to protect them from bloat, on pastures proven to be of the bloat-producing type. Sudan hay, because of its coarseness and high palatability, may be more effective than most other hays. Feeding hay on pasture may seem to be extravagant, but it is one way of safely grazing lush stands of legumes late in the fall, which otherwise could not be utilized.

5. Grass pasture at night will largely eliminate bloat on legume pasture the next day. Unfortunately, experiments on this method have been limited to only one grass, Sudan. The animals must eat a considerable amount of grass to be protected; consequently the value of less palatable grasses than Sudan is questionable.

In addition to these recommended bloat-preventive measures, one or two other precautions are worthy of mention. Practical experience indicates that continuous pasturing of grass-legume mixtures is much less likely to result in bloat than when the animals are frequently being removed and returned to the pasture. Also, certain animals are much more susceptible to bloat than others. They should be watched closely and, if necessary, kept off legume pasture entirely or disposed of.

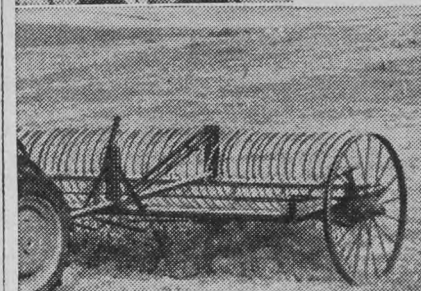
The grazing of pastures containing legumes carries with it a certain element of risk. Experimental results and practical experience, however, indicate that this risk can be greatly reduced through the proper management of these pastures. The increased carrying capacity, higher-quality pasturage, and the benefit to the soil, brought about by the inclusion of legumes in grass pastures, would seem to justify the element of risk involved.

(NOTE: H. B. Stelfox is forage crop specialist at the Dominion Experimental Station, Lethbridge, Alta.).

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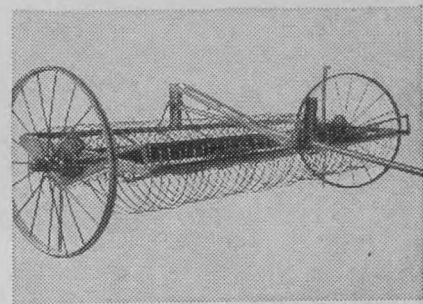


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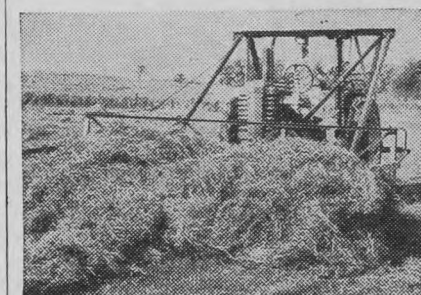
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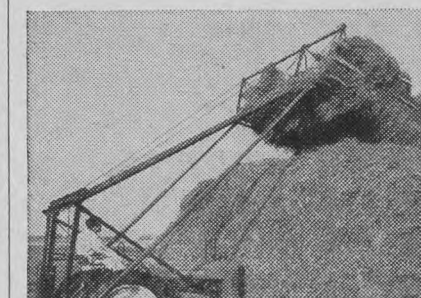


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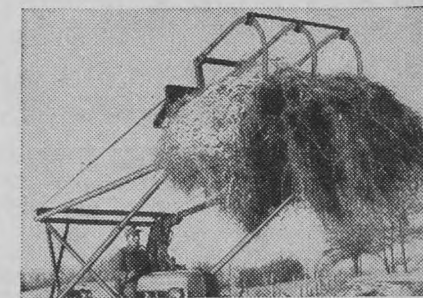
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[Guide photo.

This herd, located in south-central Alta., is well provided with grass and water.



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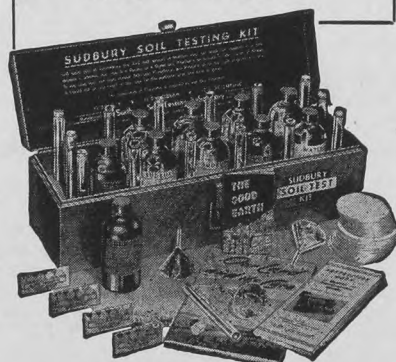
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HORTICULTURE

Trees Grown In Sod

SINCE 1941 the Experimental Station at Saanichton (Vancouver Island), B.C., has been conducting an experiment with blocks of apple and pear trees grown in sod. The object was to test the growth and cropping of these trees against clean cultivation. Several grasses were used including crested dogtail, creeping red fescue, timothy, Kentucky blue and a small amount of white Dutch clover.

The station reports that by 1946 red fescue had crowded out all others, and growth was "too thick and matted to cut with a mower." This was, of course, under about 30 inches of precipitation. Up to this time the grass had been cut annually and the hay used as a mulch under the trees. In April, 1948, all the sod plots were torn up and the sod left to decompose. In the plots under clean cultivation during the summer season, a green manure crop of cereals was grown during the winter.

Records were taken on seven mature apple trees under each treatment, and 16 mature pear trees. The total yield over the entire period was in favor of clean cultivation, but when costs were considered these differences were not nearly so important. The cultivated plots, however, did show greater circumference and terminal growth measurements. Both of these factors would probably be important in future crop years, because as the authorities at the station point out, "the total amount of growth under non-irrigation is much below the level deemed necessary for continuous cropping at the Summerland Station in the Okanagan valley." The Saanichton authorities conclude that on mature trees, short-term sod periods of about four years are economical, but if the orchard is left in sod longer than this the bearing wood is not replaced rapidly enough to keep fruit production up to the level of that secured from clean cultivation.

Early Summer Pruning

A TIMELY note comes from the Experimental Station at Morden as to the early summer pruning of shrubs. Authorities there state that the optimum time to prune many kinds of flowering shrubs is as soon as the flowers fade. Included in this group are the lilac, honeysuckle, most of the spiraeas, caragana, salt tree, clove currant, Japanese quince, coralberry, ninebark, weigelia, mock orange and the viburnums.

Trimming consists of removing the older wood and opening up the center of the shrubs so as to let in light and air and encourage new growth from the crown, or near it. Morden points out that young stems will develop brighter color and larger flowers than the older wood. A shrub that is too dense prevents new, sturdy growth from developing.

In pruning all shrubs, try to avoid destroying the natural shape of the shrub, and endeavor to renew the growth from the base of the plant. Make the cut close to a good sound-looking bud and slant the cut at an angle of about 45 degrees.

Remove deadwood any time, and nip off any long, straggly branches that throw the shrub out of shape.



Winter injury may blacken and kill the wood and in time bring this result.

The New Lawn

IF a fresh seeding of lawn grass has been made this spring, during the month of May, it is advisable to delay cutting the new grass until it has had a good chance to get established. It should be allowed to grow uncut until it has reached a height of two or three inches. If the soil is fertile and contains plenty of available plant food, it will probably need no application of fertilizer. On the other hand, if the grass starts slowly, an application of nitrogen is probably called for. The best method of applying the fertilizer evenly is to divide it into two parts. Spread one-half over the entire area going one way, and the other half over the entire area, spreading it crosswise.

Cultivating The Saskatoon

NOT many people grow saskatoon bushes in the garden, but they can be grown to produce fruit of good quality and size. They are also useful as a trimmed hedge, or in windbreak planting. At the Experimental Station at Beaverlodge, Alberta, they have been grown for years, both as cultivated bushes and as hedges.

Station authorities advise that seedlings make the most uniform plants because of their heavy, compact root systems. The difficulty is that saskatoon seed is not always easily germinated and the seedlings grow slowly. As an alternative, root cuttings are more frequently used. These are secured by selecting a healthy young patch, consisting of a single plant and a goodly number of suckers. Cut off all the top growth at ground level and then lift the roots. Collect all pieces of the root and trim to eight to 16 inches, using only cuttings with fibrous feeder roots attached. It is necessary to keep the roots moist at all times by covering with wet burlap or moss during the transplanting operation.

If many plants are required, it is easier to plow a furrow six inches deep in fallowed soil and then scatter the root pieces evenly and thickly in the furrow. Half fill the furrow with earth; pack it down firmly. Water in dry soil thoroughly. Then rake in the remaining soil as a mulch. If a trimmed hedge is needed, plow the furrow where the hedge is to be and allow the plants to grow to fill in the gap. Beaverlodge reports that the fruit produced on thick hedges tends to be rather small and woody, but is relished by birds. Fruit for household use is best produced from plants spaced six

to eight feet apart and left unpruned.

Individual plants of the saskatoon vary widely in size and quality of fruit and in plant character. Authorities at Beaverlodge say that bushes which produce fruit of good size and quality are usually rather open in form and tend to sucker freely. This type of bush is usually undesirable for use as a clipped hedge because the clipping tends to produce more suckers and eventually creates a hedge that is too wide and open.

Why A Small Fruit Set?

EVERY year fruit growers have trees which blossom heavily and set very few fruits. The most obvious answer is that pollination has been insufficient. This may be due to lack of sufficient bees, which are the principal agents. It may be partly due to cool or windy weather, which slows up the movement of insects; or some climatic condition may have cut down the supply of native insects.

Blossoms may be pollinated, but fertilization made impossible because the varieties are incapable of being fertilized by their own pollen. Among apples and crabapples, two or three varieties of each kind of fruit usually overcome this difficulty. With plums, the problem is intensified, and sometimes varieties which are not themselves of desirable quality, are necessary as pollinizers for the better varieties.

C. R. Ure, Experimental Station, Morden, also points out that the maturing of fruit is the end product of a great many processes extending over many months. Unfruitfulness may be caused by the failure of any one of these processes. In other words, strong and vigorous trees, exposure to plenty of sunlight, control of insects and diseases, adequate moisture supply, destruction of weeds, temperature changes, unbalanced plant-food supply, and cultural conditions of all kinds may affect fruit-bud formation and the ultimate development of the crop. Trees that are too shaded will manufacture less carbohydrates, which in turn are vital to fruit or flower-bud formation. Attacks by insects and diseases have the same effect, by destroying the foliage.

Mr. Ure points out that even if cultural practice is satisfactory in all respects, trees may occasionally fail to blossom. Even under such conditions it may be possible to bring about flower-bud formation in the summer by a combination of careful pruning and a judicious application of a fertilizer containing nitrogen. If these methods are attempted, it would be advisable to consult the authorities at Morden, or at the horticultural departments of any of the provincial universities. There are also horticulturists attached to each of the experimental stations, and in Alberta the Provincial Horticultural Station at Brooks is available for advice.

Early New Potatoes

SUPERINTENDENT G. D. Matthews, Dominion Experimental Station, Scott, Sask., believes that farmers neglect many opportunities for securing new potatoes much earlier than they are ordinarily obtainable from farm gardens. People in the central portion of the prairies, he says, usually have new potatoes early in August, though it is quite possible to have them a month earlier.

At Scott, about the second week in April, the dormant seed potatoes are selected from the cold cellar and placed in a heated room, with a good light, in a slanted, wooden tray. A month later the green sprouts will be one-half to one inch in length. If these are cut and planted carefully in a sheltered, warm location in the garden about May 10, the first early potatoes should be available early in July.

Ground for early potatoes should be worked over early in the spring, and if frost comes when the leaves are breaking through the ground, it is possible to cover a small patch of early potatoes with dry soil or sacks. A little tillage during June will encourage growth. Warba is the variety which the station at Scott has found most suitable, because it seems to thrive well under the cool weather which sometimes characterizes June conditions, and which will retard rapid growth.

Irrigated Strawberries

AT the Saanichton Experimental Station on Vancouver Island the average annual precipitation is 29.56 inches, of which 59 per cent falls during the four winter months November to February, inclusive. The remainder, occurring from March to October, is unevenly distributed, with only 12 per cent of the total falling during May, June, July and August.

This condition led the experimental station authorities to test the value of irrigating strawberries, which was done in 1948 in a small way, and again in 1949. Further experiments are planned for 1950, but the conclusion so far reached is that the amount of irrigation water required to supplement the summer rainfall does not appear to be very great. Last year strawberries were given four applications of water, totalling not more than 3.8 inches. This gave a soil penetration of 12 inches in 24 hours and was ample for plants set out in the spring.

On plants which were fruiting in 1949, an inch of irrigation water was applied in three applications, previous to and during picking. The yield on the 40x51-foot plot was 295 pounds of berries against 120 pounds for a similar sized test plot, unirrigated.

New Bulletins

TWO new bulletins for horticulturists have been published this year by the University of Saskatchewan, both prepared by the Department of Horticulture. The first is entitled "Fruit Gardening in Saskatchewan," and is bulletin No. 123; and the second is "Vegetable Gardening in Saskatchewan," published as bulletin No. 95.

Each of these bulletins is obtainable from the Agricultural Extension Department, University of Saskatchewan, Saskatoon, or from any agricultural representative.

A useful four-page leaflet is also available for Manitoba strawberry growers. It is entitled "Strawberry Growing in Manitoba," and is publication No. 234 of the Manitoba Department of Agriculture. Prepared by Prof. E. T. Andersen, University of Manitoba, it is obtainable from any agricultural representative in the province or by writing to either the University or the Manitoba Department of Agriculture.

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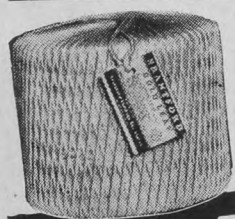


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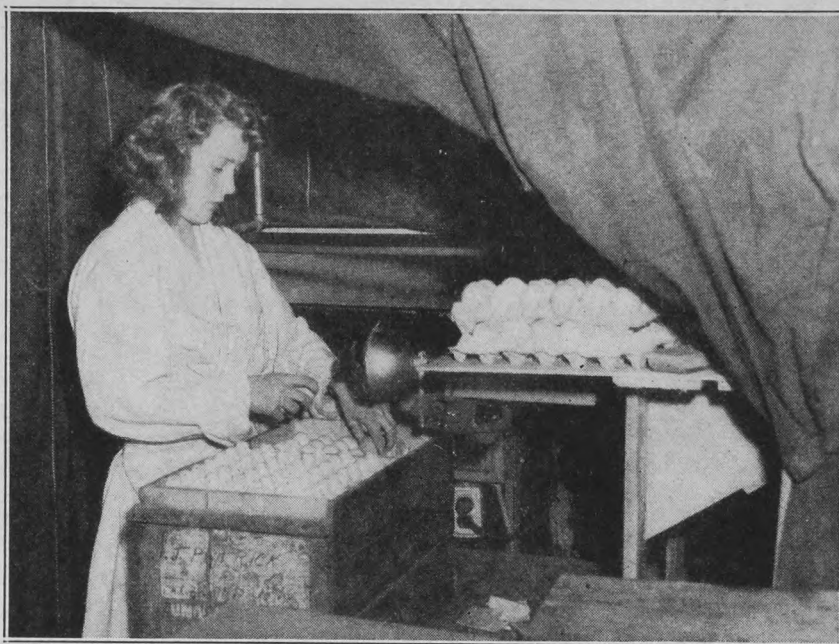
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POULTRY



Marie Stal, official egg grader in a grading station at Camrose, Alberta, grades about six cases of the 30-dozen size in an hour.

Producing Low Cost Eggs

In the face of any price set-back efficiency and better management practices are the only answer

AS the poultry industry passes through a period of downward readjustment of prices, governments and associations are able to do something to alleviate the situation. However, improvement in management is the chief tool at the disposal of the producer, says H. S. Gutteridge, Poultry Husbandman, Dominion Department of Agriculture.

A survey of 495 flocks made in 1947 by the Division of Agricultural Economics, Dominion Department of Agriculture, showed that flocks averaging 154 birds gave a return of only 45 cents per hour of labor for every dollar returned by those averaging 994 birds in size.

Labor efficiency is closely related to size of pen and labor-saving devices such as automatic feeding and watering equipment. It was revealed by the survey that when it was necessary for the poultryman to spend 82 minutes daily per 100 pullets the return on labor was only 20 cents per hour, for every dollar per hour returned when only 22 minutes were required.

Low production also increases labor cost. Flocks averaging 44 per cent production gave a labor return of only 50 cents per hour for each dollar returned by those at a level of 61 per cent production. Most costs are about the same, whether a bird lays few eggs or many. Available data indicates that only 40 per cent more feed is required for a bird which produces 330 two-ounce eggs a year, than for one laying only 40 eggs.

Farms which were below average on the three factors—size of flock, labor efficiency and rate of production—returned 20 cents per hour of labor; those above average in one of these factors returned 37 cents per hour of labor; those above average in two of these factors returned 55 cents per hour; these compare with a dollar return per hour of labor from those farms above average in all three factors.

Production costs can also be reduced by using a breed or strain of light birds. A pullet weighing 4.4 pounds can produce 186 eggs per

year on 27.7 pounds less feed than a bird which weighs 6.6 pounds. Actually the smaller bird will produce 186 eggs on nine pounds less feed than it will take to maintain the larger bird without any production at all. At a production level of 150 eggs per bird, the smaller breed would appear to produce eggs at about five cents a dozen less cost than the large breeds. Added to this, the smaller birds require less housing space. The greater market value of the heavier birds at the end of the production season does not nearly cancel out the advantage of the lighter breeds, according to the findings of the survey.

Over half of the total cost of producing eggs goes to meet the feed bill. It is not wise to attempt to economize in quantity or quality of feed during the starter period. However, during the rearing period sunlight and green pastures are of real value in reducing costs. In times of high feed costs it would often be possible to reduce protein feed to some extent, though, of course, this must not be carried too far. Inadequate or unbalanced rations are poor economy, but rations can be well balanced while still utilizing a large proportion of home-grown grains, supplemented by poultry concentrates.

Wastage is always costly. Rats and mice make away with costly feed; filling hoppers too full causes losses, and improperly constructed hoppers are a source of loss. In the same way, disease and poor birds will reduce returns. Whatever knowledge of the prevention or cure of diseases is available should be utilized at all times, and careful and rigorous culling practised to rid the flock of unprofitable birds.

Coccidiosis In Chicks

IN the fight against coccidiosis, "prevention is the best cure." If the disease establishes itself in the flock it will not be possible to escape without losses.

The most common form is the caecal or "bloody" form. Of the many drugs and recipes that have been sold

IF we could place in your hand right now, one of our 1950 Tweddle Baby Chicks, you would say at first glance, this is the finest baby chick I have seen. They have that certain something we find difficult to say in cold type—a bubbling over robust health, a lusty peep, sharp clear eyes, fine body structure, strong legs. They stand so erect, so proud. Well, why shouldn't they? They are from the leading production strains in Canada and they bear one of the most outstanding names for quality in the Poultry World, Tweddle. You will be amazed at our astonishing low prices for our R.O.P. Sired chicks for June. 12 pure breeds, 13 cross breeds. Day old, started, older pullets, Turkey poults. Free catalogue.

Tweddle Chick Hatcheries Limited
FERGUS, ONTARIO



HAMBLEY

Immediate delivery most breeds. Why not start a few turkeys early in the same brooder with your chicks this year, separate them at 5 weeks. Turkeys now in brooders.

Approved	100	50	25	10
B.B. Bronze	90.00	46.00	23.50	9.50
Beltville	80.00	41.00	21.00	9.00

BIG, STRONG TURKEYS, started one week, add 10c, two weeks 20c, three weeks 30c.

You will do better with Hambley's R.O.P. Brod Chicks. The highest Government Grade produced in commercial hatcheries. Now hatching twice weekly at your nearest Hambley Hatchery, also big, strong, healthy chicks in brooders. Started Chicks add 5c each per week. For immediate and prompt delivery.

R.O.P. SIRE	CANADIAN	R.O.P. BRED
100 50 25	100 50 25	100 50 25
17.25 9.10 4.80	W. Leg.	18.75 9.85 5.20
35.00 18.00 9.25	W.L. Pul.	38.00 19.50 10.00
4.00 2.50 1.50	W.L. Ckl.	4.00 2.50 1.50
18.25 9.60 5.05	B. Rocks	19.75 10.40 5.45
33.00 17.00 8.75	B.R. Pul.	36.00 18.50 9.50
12.00 6.50 3.50	B.R. Ckl.	13.00 7.00 3.75
18.25 9.60 5.05	N. Hamp.	19.75 10.40 5.45
33.00 17.00 8.75	N.H. Pul.	36.00 18.50 9.50
12.00 6.50 3.50	N.H. Ckl.	13.00 7.00 3.75

APPROVED				R.O.P. SIRE		
19.75	10.40	5.45	L. Sussex	21.25	11.00	5.75
34.00	17.50	9.00	L.S. Pul.	37.00	19.00	9.75
12.00	6.50	3.50	L.S. Ckl.	13.00	7.00	3.75
19.75	10.40	5.45	B. Aust.	21.25	11.00	5.75

Pullets 96% Acc. 100% Live Arr. Gtd.

J. J. HAMBLEY HATCHERIES

Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Brandon, Portage, Dauphin, Swan Lake, Boissevain, Abbotsford, B.C., Port Arthur, Ont.

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by staying out this year. Every prospect very profitable ratio between feed and eggs next fall. Past growing Top Notch chicks mean earlier and bigger profits to you, and their livability can't be beaten, because they are Government Approved from pullet-tested stock chosen from money-making blood lines. All popular pure breeds and cross breeds, day old, started, older pullets, Turkey poults. Lower prices for June. Free catalogue.

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and used for its treatment, some are useless, some are weak, and some are not yet adequately proven, says Dr. C. H. Bigland, Veterinary Pathologist of Poultry Diseases, Alberta Department of Agriculture. The only drugs that can be relied upon are certain of the sulphonamides, including sulphamethazine, sulphaquinoxaline and sulphamerazine. These are available from the local druggist or veterinarian. In using them it is important to follow the directions.

Careful management may make the use of these drugs unnecessary. The chicks should be allowed to get down on the floor as early as the brooding arrangement allows. Dry litter should be put down. Frequent stirring and the addition of one pound of hydrated lime for every four square feet will help to keep it dry. It is well to get some depth to the litter fairly quickly. If wet spots appear, remove them at once and replace with dry. If the water fountains are placed on a wire stand it will serve to keep the chicks away from wet areas around the fountain.

It is also a good plan to have the chicken roosts over a wire netting, so it is possible to keep the chicks away from droppings under the roosts.

The brooder must not only be kept dry, but also well ventilated, and provide plenty of space for the chicks. Up to four weeks of age chicks need one-half square foot, up to eight weeks one square foot and up to 12 weeks up to 1½ square feet per chick. When they go on the range, one acre will be sufficient for each 300 birds. Even here dryness is important. Bald spots should be corrected, a good sod maintained, low spots and puddles drained and water fountains and feed troughs moved daily.

Even with the careful attention to detail that these recommendations suggest, an outbreak is always possible. It is a wise precaution to have a bottle of sodium sulphamethazine or sodium sulphaquinoxaline on hand so that treatment can be started immediately. Drugs that can be given in water should be provided, as chicks will drink even when they will not eat.

Good Range Needed

THE cost of developing a bird to the point where it will begin to produce eggs, or will provide meat, can be reduced by the use of good range. For best results, range free from contamination, and providing abundant succulent forage throughout the season is desirable.

The crop grown for range must be adapted to local soil and climate requirements. The Experimental Farm, Brandon, Manitoba, has found that in the area served, alfalfa sown at the rate of about 12 pounds to the acre is well suited. It begins growth early in the spring, and recovers rapidly when it rains following dry conditions.

A three-year range rotation is used on the farm, allowing a two-year idle period between each crop of chickens. This serves to keep the range free from parasites and contamination by disease organisms. On the spring following the use of the land by the birds, it is cultivated and fallowed. In mid-summer of this first year it is seeded to alfalfa, with or without a nurse crop. This gives the alfalfa a full year in which to become established before the chickens are turned in. If growth is heavy a hay crop may be taken.

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says James M. Eccles, Brampton, Ontario,
1949 Grand Tractor Winner, International
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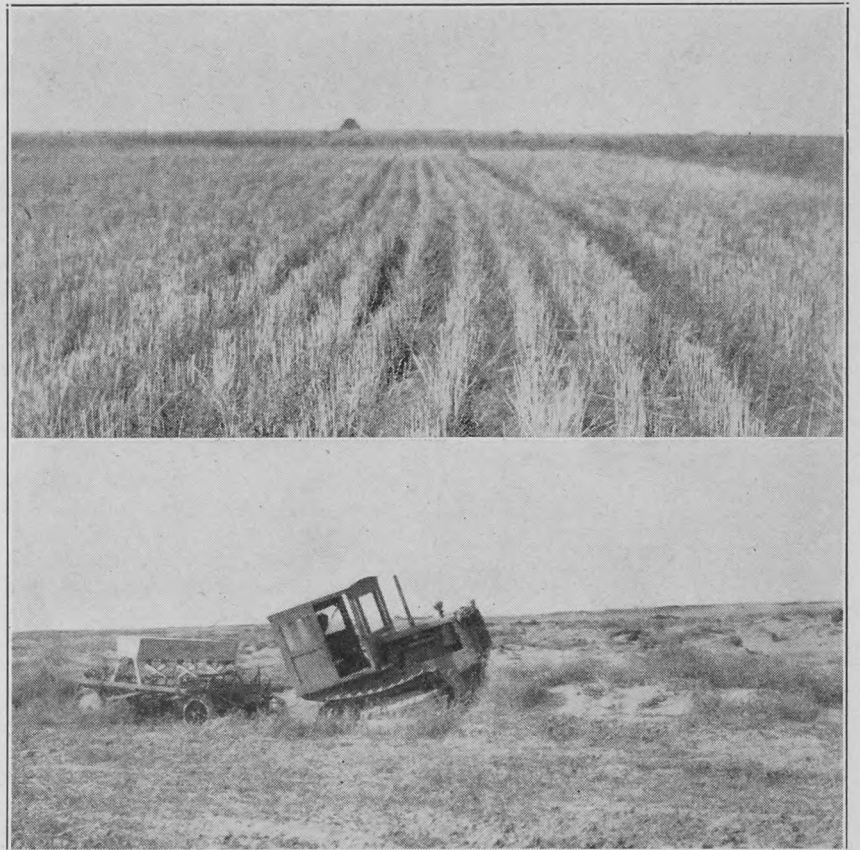
Better Land Use

Continued from page 7

direction of co-ordinating all services relating to farm lands, by vesting in the Department of Agriculture, all responsibility for agricultural land. There is now, therefore, a Land Utilization Branch of the department, and the stage is set for a steady and persistent development of efficient land use throughout the province. The process may take 25 years, but there is evidence already that it need not take so long if the Agricultural Conservation and Improvement Committees, working with the agricultural representative and the Department,

has now been made. Two examples will serve to indicate the kind of work already begun. In the Agricultural Conservation and Improvement District centering on Maple Creek, where A. M. Shaw is agricultural representative, the District Board has concerned itself with land-use studies in R.M. Carmichael No. 109 and the Local Improvement District No. 112. A fact-finding survey has also been completed in R.M. of Craik No. 222, in the central portion of the province with respect to a block of about 80 quarters of potential fodder and pasture land.

For the purpose of making land-use studies within an agricultural representative's district, each representative



—Scott Exper, St'n photos

Top: Spring rye stubble cut high before grass seeding on reclaimed sandy land of community pasture. Bottom: Reclaiming wind-blown sand for community pasture.

will interest themselves actively in this basic farm problem. Already some committees have done so.

The 67 million acres of settled area in Saskatchewan (1946) can be broken down approximately as follows: Occupied farm land, 59 million acres; and unoccupied land, eight million acres. Improved farm land, 35.5 million acres; and unimproved farm land, 23.5 million acres, which includes 20 million acres of prairie and natural pasture, two million acres of woodland and 1.5 million acres of lakes, sloughs and other waste land. The 1949 estimates of the improved land in Saskatchewan include: 12.6 million acres of summerfallow, 15.7 million acres of spring wheat, 5.1 million acres of oats and barley, 690,000 acres of rye, and 432,000 acres of hay, clover and alfalfa, with the balance devoted to comparatively small acreages of flaxseed, potatoes, mixed grains, peas and corn.

THIS vast acreage is far too big on which to attempt land-use adjustment in one operation. Even divided in 36 parts, or agricultural representative districts, though convenient for supervision and provincial assistance, such units still remain unwieldy. The municipal unit is much more practicable and it is on this basis that a start

is supplied with a guide to procedure. After discussing the general problem with his agricultural committee, the agricultural representative prepares factual material relating to the area to be surveyed. This material he obtains from various official sources, including the Economics Division, Dominion Department of Agriculture, the University of Saskatchewan, the Saskatchewan Assessment Commission, the Census Bureau, the Municipal Secretaries, the P.F.R.A. and the nearest Dominion Experimental Station. This information includes data, by acreage or quarter-section, with respect to the economic classification of land, settlement, size of farm unit, numbers of livestock, acreages devoted to different crops, yields, income distribution, ownership and occupancy, assessment, and numbers of dugouts, stock-watering dams and irrigation installations available. Included also are weather and other data, such as precipitation, temperature, wind velocity, evaporation, seasonal rainfall, topography, Prairie Farm Assistance and any other pertinent information for which the facts are available.

This preliminary land-use report is then supplied to each member of the local committee. Along with it each member of the committee receives copies of a questionnaire, which, by

means of personal inspection and interviews with occupiers of land, will enable him to report in more detail with respect to either the area in general or some particular project which in the opinion of the committee needs close study.

When these questionnaires have been completed, the detailed data for each farm unit and division of the municipality are then summarized by the agricultural representative and are presented to the Agricultural Committee of the municipality for detailed study. Eventually this report is also presented to the Land-Use Committee of the District Agricultural Conservation and Improvement Board. It may be accompanied by a list of the problems as they appear to the local committee, who may suggest solutions and remedies. The Land-Use Committee will then make a further study of the problems and report to the District Board.

THE report of the Land-Use Committee for R.M. No. 109, for example, comments: "It might well be said that the past fifty years of exploitation have shown the way to fifty years of conservation . . . of necessity each acre of land must be used more efficiently — expansion must be made vertically rather than horizontally . . . Under normal and the best climatic conditions these soils (brown) produce a very nutritious, natural forage. Although lacking in nitrogen and phosphorus, they are capable of producing a superior quality of wheat in years of average or better-than-average climatic conditions . . . This potentially productive soil, without taking into full consideration the climatic factor, has been one of the misleading elements, both in the use of these lands for cultivation of cereal cropping and from the point of view of grazing rates upon range land." The basic problem is therefore established.

A classification of the municipality on a quarter-section basis, as to land classes, indicated that the critical land class was Land Class II. Land Class I is land that will produce less than 350 bushels of wheat per quarter-section; Land Class II, less than 475 bushels; Land Class III, less than 720 bushels; and Land Class IV, less than 900 bushels on the average. The municipality has about 1,300 quarters in all, of which 206 are in Land Class II, which is marginal for wheat production, and 478 in Land Class I which is sub-marginal. Above this there are 412 quarters in Land Class III, and 206 quarters in Land Class IV. In acres, the municipality has 124,416 acres of cultivated land, 1,036 acres of tame grasses, and 80,870 acres of native sod. The population of the municipality was 1,238 in 1941 but only 799 in 1948. There are 26 acres of grazing land for each livestock unit, and the livestock population is fairly generally concentrated on the Class I and II lands.

The committee also reported that there is considerably more land available that is suitable for irrigation, than there is water to irrigate it. Further, about 2,300 acres should receive immediate attention, because there appears to be sufficient run-off water, and the land owners are favorable to development. In the municipality there are already 395 water projects operating, but the committee estimates that within the municipality there are 1,500 feasible water projects.

Why This Diesel Tractor's Fuel Tank "Holds" So Many Acres of Thrifty Work!

Filling the Diesel D4's 25-gallon fuel tank for a full 10-hour day of duck-footing on Riverside Ranch, owned by Barney Zoratti, Beaver Mines, Alberta. Other view shows the D4 duck-footing summer fallow grain land.



The fuel tank of the 43 H. P. (6-plow) Diesel D4 holds just 25 U. S. gallons. But under average Prairie Province conditions, that's ample to work a 10-hour day. That's plenty to duckfoot 75 or more acres of summer fallow. That's sufficient to one-way 60 acres of stubble ground; or moldboard 30 acres.



► For like all "Caterpillar" Diesel Tractors, the D4 develops its heavy-duty pull on the non-premium power-rich fuels. "Caterpillar's" precombustion chamber design conditions the fuel for clean, non-smoking combustion. And load-reflex governing regulates fuel use accurately to load demand.

Besides its remarkable engine efficiency, the "Caterpillar" Diesel Tractor has broad, multi-grousered tracks—to

turn engine power into drawbar pull without wasteful slippage. That's a big fuel economy factor, especially on such work as summer fallow.

That's why the fuel tanks of all 5 sizes of "Caterpillar" Diesel Tractors hold so many acres of thrifty work. It's why one of these Diesel Tractors commonly saves its Canadian owner 60% to 80% on fuel expense alone!

And "Caterpillar" Diesel Tractors that have done 25,000 hours and more of heavy farm work are still at it. That exceeds 25 tractor years for the average Prairie Province farmer!

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This sectional view shows the simplicity of a "Caterpillar" Diesel Engine's fuel injection valves. Mechanism consists of a needle valve, permanently enclosed in a small metal capsule. If the need ever arises, this mechanism capsule can be quickly and cheaply replaced. Precombustion chamber design permits sizing the orifice for non-clogging performance.



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"So fine for muscle soreness

I even keep a bottle in the barn!"



says **PAUL D. ANGSTADT**

Sinking Spring, Pa.

● "When a tough job leaves my muscles stiff and lame I rub on Absorbine Jr. *right away*," says poultryman Angstadt. "It eases pain and soreness FAST... makes you feel like a different person."

That's because Absorbine Jr. has *two* beneficial actions. First, it promptly cools and soothes those sore places. Second, it counters the irritation that causes the pain with a grand muscle-relaxing effect that helps make you feel good all over.

Next time your overworked muscles shout with pain, rub on time-proved Absorbine Jr. and *clock* how fast the pain eases! Get your Absorbine Jr. wherever drugs are sold... \$1.25 a long-lasting bottle... Introductory Size 15¢.



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Absorbine Jr.

The average precipitation at the Carmichael Experimental Substation over a 14-year period has been 15.04 inches, with a 6.23-inch precipitation during the growing season. The committee therefore reasons that if eight inches of rainfall are required to produce a 10-bushel crop at the station, crop failures should be practically eliminated if less than two inches of additional rainfall could be conserved. The problem, they conclude, is not so much a lack of rainfall as one of conserving the moisture where it falls.

THE land-use problems of the municipality, as listed by the Land-Use Committee, are eight in number. These will be recognized as common to a great number of communities in western Canada, though not necessarily in the same combinations. They are as follows: (1) Size of farm unit; (2) horses not in use are consuming too much feed; (3) overgrazing of pastures; (4) under-development of low ground; (5) wind erosion and run-off water erosion; (6) long-term credit to farmers at a cheaper rate of interest; (7) wheat growing alone is ruining the land; and (8) conservation of moisture that falls on the land.

For purposes of comparison, the problems in the Local Improvement District No. 112, reported by the same committee, may be noted. This area consists of six townships, and parts of three others adjoining the Alberta boundary north of the Cypress Hills. This L.I.D. comprises 150 farm units, which would average six quarter-sections. Actually, 11 operators control 98 sections. Most of the land is in Class I or Class II, which is poor to very poor. Nevertheless there are eight farming units of only one-quarter section, 23 of only one-half section, another 23 of three-quarters and only 96 out of 150, of a section or more in size. The area is overstocked with livestock to the extent of about 25 per cent. Cultivated land yields, on a long-time average, 9.2 bushels of wheat, 15 bushels of oats, 12.2 bushels of barley, seven bushels of rye, or four bushels of flax. During the winter, hot, dry chinook winds often leave the ground exposed and during July and August there is usually drought, accompanied by temperatures up to 110 degrees. Prairie Farm Assistance payments have been received by L.I.D. No. 112 for eight out of the last 10 years.

The problems of the area are therefore listed by the Land-Use Committee as: (1) Uneven distribution of land; (2) overgrazing; (3) absentee and transient farmers; (4) lack of agricultural extension information regarding government policies; and (5) the

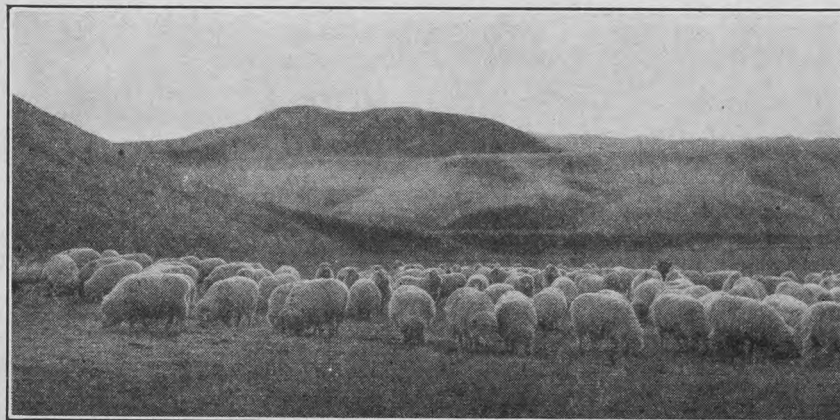
necessity for cutting costs and increasing yields.

MUNICIPALITIES do not solve their land-use problems by hearing reports of committees. Consequently the committee is continuing its study of ways and means, now that the problems have been brought out into the open. These problems, wherever they may be made apparent after a careful examination of all known facts, will not be easy of solution. They include the securing of a satisfactory living by the human population, while at the same time providing for the conservation of soil and water resources, and the maintenance of soil fertility—all of which require the co-operation of a great many people. The ownership, or the possession of land, confers certain privileges upon individuals, which they are often unwilling either to give up, or to merge with those of others in an attack on difficulties common to all. Absentee or corporate ownership often involves legal difficulties. Then, too, the most desirable use of land may change within a period of a few years due to the introduction of new machinery, new methods of cultivation, improved varieties, or altered market situations.

Notwithstanding these complexities, however, certain basic facts remain. They were pointed out in 1944 in the report of the Soils Survey of Southern Saskatchewan. "Neither misuse of the soil nor poverty among those who dwell on the land," says this report, "can be neglected, by either the state or the nation. Both conditions are an inevitable consequence of the wrong utilization of land, and both must eventually affect the well-being of the nation."

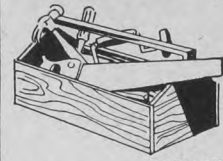
True as this statement is, it does not imply that people who are living on land which will not average more than 720 bushels of wheat per year, per quarter-section, should depend entirely on the government, either provincial or federal. Only the local people can really know their problems. Only they can really make a study of the local situation and list those problems. Only they, and especially the wisest and most experienced among them, can determine where and how co-operation among the people of the area can do the most good in lifting the level of farm family living.

The obvious place to begin is with the right use of land. This is a community as much as an individual problem. The right solution to the problems of efficient land use may well prove to be the most urgent need of vast areas of western Canada, particularly in nearly all of Saskatchewan and parts of Manitoba and Alberta, in 1950 and later.



Sheep often utilize feed resources that other livestock waste.

Building Ideas FOR THE Farm

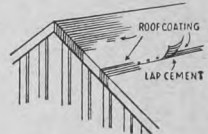


PRACTICAL HINTS ON MATERIALS AND METHODS

The important thing to remember about roofing, is that it costs just as much to apply a cheap, short-lived material as one that will last twice as long. Therefore, good roofing is economical in the long run. You can't go wrong by choosing Johns-Manville Asphalt Shingles or J-M Asphalt or Asbestos Roll Roofings. Manufacturers like Johns-Manville make their own felt, and use only the highest grade of asphalt for saturating and coating into which granules are imbedded for lasting colour.

A FEW PRACTICAL ROOFING TIPS

Don't apply Roll Roofing unless the pitch is at least 4" to the foot. Don't skimp on lap cement. Be sure to drive nails as shown in the direction sheet which Johns-Manville packs in the rolls. Remember, you can add to the life of the roof by painting every few years with Johns-Manville Regal or Regalume (Aluminum) Roof Coating.



FOR SAFETY USE A CHICKEN LADDER WHEN MAKING ROOF REPAIRS

It's easy to build a simple chicken ladder for use when inspecting your roof and making roof repairs. This will make climbing easier and safer and in addition will protect the roofing material.

WHAT MATERIALS ARE BEST? — Johns-Manville offers a wide choice of roofing materials for farm buildings. J-M Slatekote roofing, for example, is an economical asphalt roofing. It is available in a choice of weights, styles and colours — ideal for barns, milk houses, implement sheds, etc. If you want the best in ready roofing then you should get the facts on J-M Flexstone Roll Roofing. A heavy base felt of mineral asbestos fibres gives this roofing extra resistance to fire, weather and wear. Johns-Manville also makes a variety of Asphalt Shingles which are excellent for farm homes and other permanent buildings. Flexstone Asphalt Strip Shingles, made on an asbestos felt base, are also recommended. Johns-Manville provides a wide choice of long lasting colours.

ROOF COATINGS — The sun is the roof's worst enemy. It tends to dry out any type of roll roofing. An application of Johns-Manville Regalume Roof Coating, Asbestos Roof Coating or Regal (black) Roof Coating will renew the life of the roofing and add many years to its service.

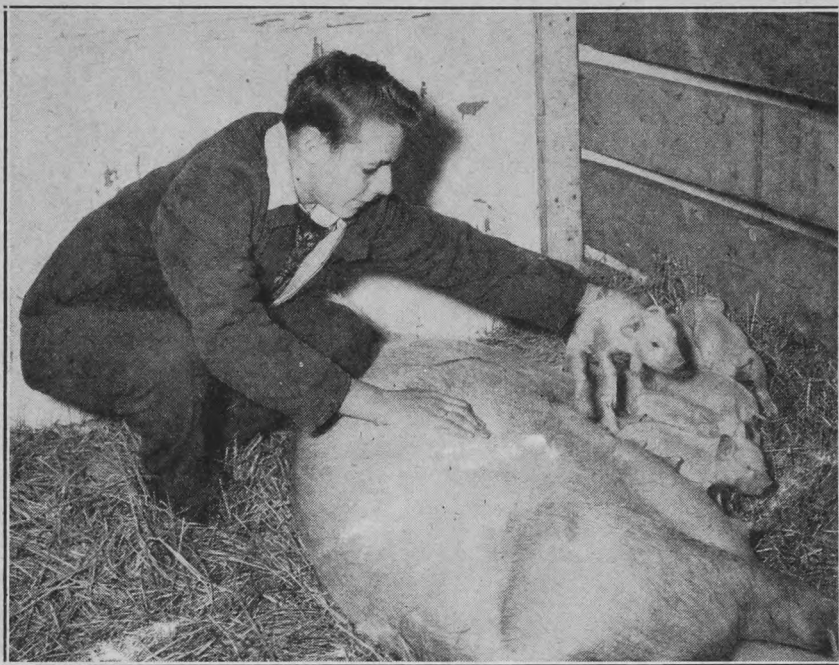
FREE! For informative booklets on Johns-Manville Asbestos and Asphalt Roll Roofing and J-M Asphalt Shingles, see your nearest J-M dealer or write direct to Canadian Johns-Manville, Dept. 161, 199 Bay Street, Toronto. Be sure to state which roofing material you are interested in.

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Care during farrowing time is a must for profitable hog production.

Tractor Club Under Way

THE Oakbank Tractor Club of Oakbank, Manitoba, became the first in western Canada to initiate its program of study. At a recent meeting the newly formed club studied farm accidents and the precautions which every tractor operator should take to reduce hazards.

President Don Roberts introduced George Bryce, Manitoba Extension Agricultural Engineer. Bryce commented that faulty operation of farm machinery and equipment is all too common. "We are sure," he said, "that our tractor clubs will lead the way in correcting these bad habits." He reported that over 20 clubs were being formed in the province and that interest was keen.

A report was heard from Malcolm Murray, who was a delegate from the club at a three-day course in Brandon. His reaction was that safety depended upon the "nut" behind the steering wheel.

"Better Care, Not Repair" is the slogan of the club. Instruction has been outlined on a three-year basis starting with safety, lubrication, tire maintenance, carburetion and ignition. The members are from 16 to 21 years of age. Each is supplied with a workbook outlining the eight lessons of the first-year course. After the lesson has been discussed at a meeting a work sheet must be completed and servicing carried out with the farm tractor. Each meeting starts with a review of the previous lesson in the form of a quiz. The end result will be an achievement day at which the boys will display the results of their year's work.

Faraway Places

IF you should ever have cause to travel up to Buffalo Narrows in the northern reaches of Saskatchewan to the north and west of Prince Albert, you would quickly remark on the great differences between it and the prairie towns that you know. It is located between the Peter Pond and Churchill Lakes and instead of seeing cars and wagons you would see boats, canoes and barges. Aircraft are more common than cars, and farm machinery is unknown. The principal industries are fishing and lumbering.

In these surroundings a homecraft club is thriving, according to a report

from Mrs. Helen Lewis of Saskatoon. In spite of such different surroundings the fun and projects at the meetings are very similar. The club members have finished their first project—beginners dressmaking—have held an achievement day, and are now busy on their second project.

The club consists of six to eight teen-age girls. They all have dark hair and eyes, inherited from their Indian forefathers and all wear attractive, beaded moccasins.

A Useful Lead

THE Lions Club at Chilliwack, B.C., developed an original idea in their effort to encourage local club interest. They sponsored an essay competition to which only members of the Chilliwack Calf Club were eligible. The winner of the \$50 prize was Barbara Jones.

The unique feature of the competition was the stipulation that was applied to all contestants. The entire amount won had to be invested in a registered heifer calf for this year's calf club. Barbara, who won with a 400-word essay entitled "Meeting the Challenge for Dairy Cattle Improvement Through Calf Clubs" favors the Jersey breed.

Predator Control

THE Saskatchewan Fish and Game League are sponsoring a sweep designed to rid the province of some of its worst predators. Cash awards to a total value of \$4,000 are to be given, with a first prize of \$1,000 and 108 others ranging from \$500 down.

In order to determine winners, predatory birds and animals have been given point values. A crow is worth two points, a magpie four, a great horned owl five, a coyote 20, and a timber wolf 40. Any combination of predators totalling 40 points entitles a contestant to one draw ticket. The draw for prizes is to be made some time following the end of the competition which closes on December 31, 1950.

Predator control is a necessary part of any program of conservation of game and song birds. However, the vast majority of hawks and owls are of great value to farmers and contestants are cautioned to avoid indiscriminate destruction of these useful birds.

BONDERIZING

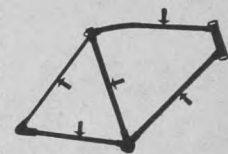
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C.C.M.'S FAMOUS RUST-RESISTANT BASE

*For a
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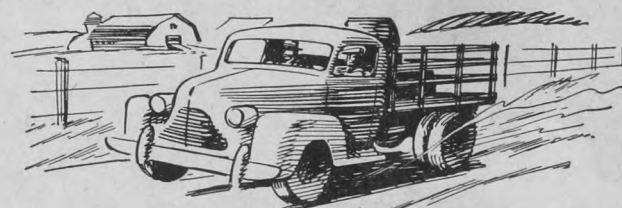
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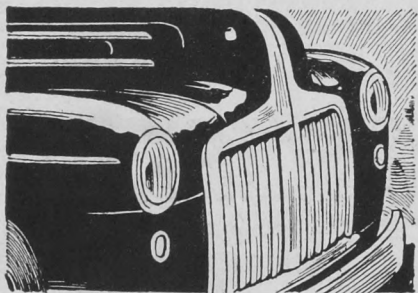
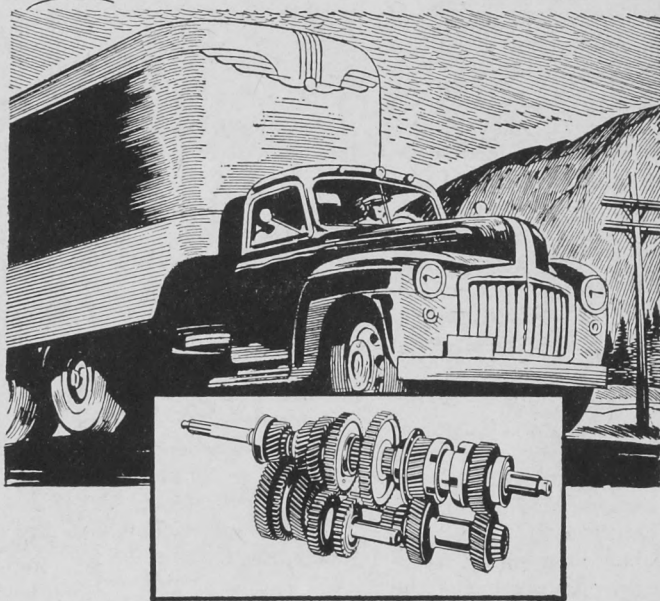
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IN EVERY LIFE

Canadian Nickel



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Can Get A Cougar

Continued from page 15

stick to the easy way. I had had faith in that place. I went home, marked the date on the calendar, and made my report to the encouraging woman.

"It's slow going," she stated. "At this rate the winter will be over before you have found out where the creature likes to go. And when you do find out, so what?"

"You'll see," I said. Today I will send off an order by mail and in ten days or so I will receive something very necessary for this job."

When the package arrived, I unwrapped it and displayed the contents.

"What're you going to do with the clothes line?" asked my wife.

"This is no clothes line. It's a steel snare, complete with choker and swivel. It cost a dollar and a half, which is going to come out of your share of the bounty money. This snare is what is going to fix that cougar, I hope."

NEXT morning the cabin was aromatic with the smell of hemlock branches boiling in the best saucepan. The snare was immersed in the br w which gave it a nice black



The little cave that cost me a shot at a cougar.

color besides removing any odors obnoxious to wild creatures. Next it was dunked in boiling wax to prevent rust and to make it free running. In the afternoon I hiked off into the bush to set it at the place where I had seen tracks twice before.

Setting a snare is very simple but this being the first time I had hung one I fussed over it a good deal. The usual complicated set-up of spring pole, trigger, etc. My previous calculations did not reveal that by the time I had done all the work necessary the surrounding country would be tracked up like a moose yard. So I just hung a husky pole across the part of the deer trail I fancied and spiked it to a good-sized fir so the pole would act like a teeter-totter with one end heavy. This I thought would take care of any strong lunges the aggravated feline might make.

I anchored the end of the snare cable to the pole with haywire and got ready to arrange the loop. A good deal of doubt assails a fellow about this time! You think a loop twelve inches across looks all right but it means narrowing the trail down with

bits of brush. When you've done that it looks so narrow you are afraid any animal will be suspicious. You arrange the bottom of the loop at what you think is the right distance from the ground. Then you measure it and find it is only eight inches when you have previously made up your mind, by calculations based on the size of numerous cougars, that the height should be twelve inches. So you change it and worry because it looks too high. Finally, it is hung right, held in place with bent hunks of wire onto bits of brush.

When I stepped back to look the business over, I was pretty well satisfied. From the top of the bluff, about thirty feet from the snare, I took a final look and decided that any time I came to inspect it this was a good place to look from without going too close.

That evening I reported my activities. "What happens is this," I explained. "The animal comes along, unsuspecting. He pokes through the narrow place on the trail, his head going through the loop, his chest hitting the bottom wire. He takes a couple of steps and this pulls the loop off the wire fastenings. Another step and the noose begins to close a bit. Another step and the animal feels some hindrance to his progress and, suspecting a branch or bit of wild honeysuckle, he gives a strong forward push to get through it and this tightens the loop firmly around his neck, the choker preventing it from opening."

"From then on I guess he gets mad, huh?" wife speculated. "I'll bet the snow flies!"

"Undoubtedly, but I would say a snare is pretty humane compared to the average trap. The captive doesn't last long."

If I had to say what was the reason for ninety per cent of hunting disappointments I would put it down to failure to keep the mind on the job. Mental meandering is too common to hunters and in my case it lost me a pip of a chance for a shot at the cougar. Every few days I would mosey along to look at my snare and occasionally, finding the snow-hung forest particularly enticing, I would fool around a bit looking at tracks and fossicking out woody secrets. It was one of those secrets that got my mind off hunting and lost me my chance to shoot a cougar on the ground.

It was getting along for two weeks since I had hung the snare and by all calculations the cougar should show up pretty soon. So, one afternoon, after giving the loop a final check I decided to go along the base of a line of rocky bluffs to see if I could find a break in the wall which might be a good place for another snare.

While I was reasonably familiar with the location, I had never really explored it carefully owing to what looked like an overdose of brush which I didn't fancy. But, as is so often the way with these places, I discovered that once through the clump of thick stuff the base of the bluff was very nice, sloping gently down from the wall of rock, sparsely timbered with big firs. Then, where I least expected it, the rocky wall dipped back and a steep but easy way, fifty feet wide, led up to the crest. A well-marked deer trail zigzagged up proving the place to be much used by game. I did not, however, go up for



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"While I hand over seeds and geranium-wisdom, guess what folks praise next? My hands! They look soft, lovely, much too lady-like to dig in flower-pot dirt."

"The reason—hiding behind my best blossom on a window sill—is a bottle of Jergens Lotion. I often smooth it on my hands (and on my green thumb, too!)."



"Hands that do canning look pretty in the parlor, after Jergens smooths away redness, roughness. (10¢, 28¢, 53¢, 98¢.)"

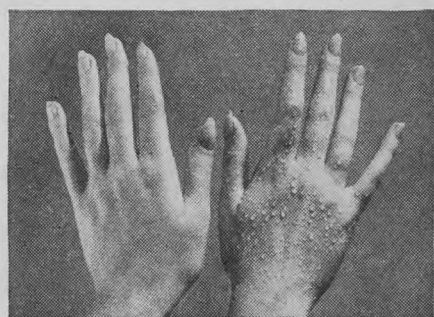


"Salting meat dries hands! So — Jergens again! Being liquid, it quickly furnishes softening moisture thirsty skin needs."



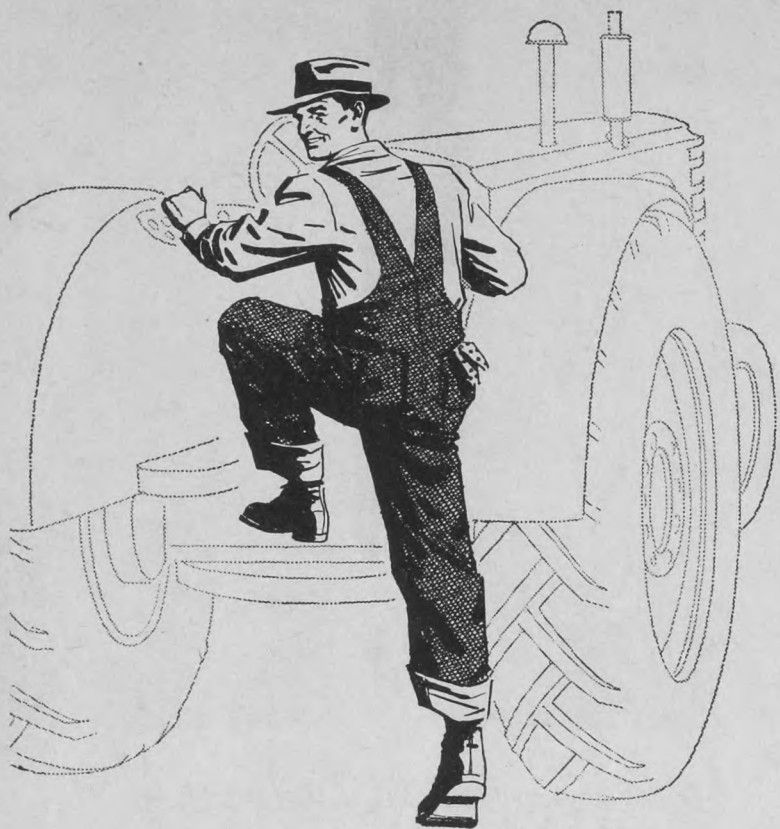
"Charlotte lends a hand to dishwashing. So, I lend her my Jergens in return. Jergens Lotion keeps hands free from chapping, even after laundering and floor-scrubbing."

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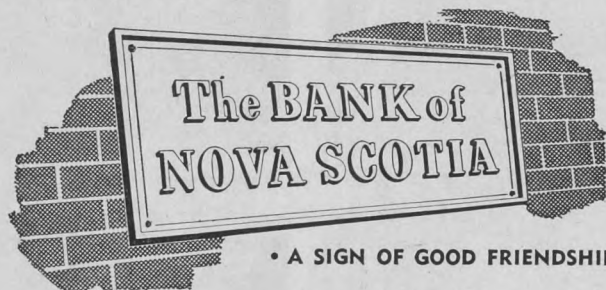


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F-342

just past the place the bluff looked interesting.

FORTY yards past the deer trail I rounded a knob of rock and came upon one of those forest secrets. It was the low narrow opening of a cave. In this part of the world caves are very much a novelty. At once I forgot all about cougars and went to investigate the hole.

The opening, upon close inspection, was smaller than it looked and I would have to get down to look inside, so I leaned my rifle against a spirea bush, then laying on my belly, peered in. The hole went straight into the solid rock for about four feet, then turned sharp left. Eager to find out just how far the hole penetrated I squirmed out figuring on getting a supple stick that I could poke in ahead of me around the bend.

"This would sure be a fine place to hide with a camera if a fellow wanted to make deer pictures," I thought. "An animal could come down that trail and never suspect a man was hiding there."

I had hardly finished thinking about it when a movement at the top of the incline put life into the forest. For a second I thought, "A deer," then the next glimpse made me duck quickly behind the rock and start snatching for my rifle, for the movement had turned into the tawny shape of a cougar moving quickly down the deer trail.

but I decided to poke a stick into the hole anyway.

I had just cut a cedar branch and trimmed it when, off in the forest, I heard a noise. It seemed about a quarter of a mile away and consequently was rather faint but it was very definite. It sounded as if half a dozen tongue-tied woodpeckers and a family of mute squirrels were running up and down a rough barked tree, but the sound was somehow heavier and occasionally there was the unmistakable noise of snapping branches.

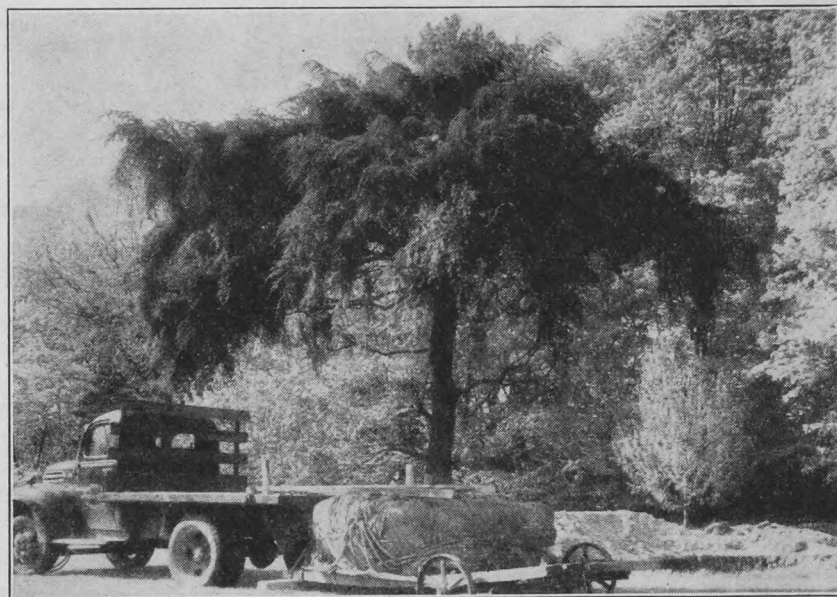
I listened for some seconds, very puzzled, then the thought hit me. "The snare! It sounds as if that cougar hit it!"

Dropping the cedar stick I shot my knife back into its sheath, grabbed the rifle and got into the cougar's tracks in about six jumps. Two hundred yards and I stopped, listened. All noise had ceased.

"If he's bust loose I turn lunatic," I told myself.

I plowed ahead, making a mental note to tie any more snares I made with a boom-chain. Within a hundred feet of the snare, I listened again. The tracks headed straight for it, but no sound filtered through the bush. I went ahead, anxiety bubbling out of my shirt collar.

Then, as I came in sight of the snare, the world turned rosy. The snow was littered with bark. The brush was butchered and flattened.



[Photo by Paul Hadley]

Even large trees can be moved successfully, as shown above, by taking up plenty of soil with the roots. This is a weeping hemlock, a valuable and rare evergreen.

Never lean your rifle against a spirea bush! The confounded little twigs catch the sling-strap, the trigger-guard, and under the bolt handle. In my impatience I yanked hard to free the gun and so doing drove the peep sight deep into the snow, plugging it.

When I looked again the cougar was at the bottom of the slope, quartering away from me, not more than sixty yards away. A beautiful sight as it plowed through the snow dipping low under snow-hung branches. Then it was gone, silent as a swooping owl, only the deep furrow of its tracks left to prove I hadn't dreamed it.

Well! I have hunted long enough not to burst into tears over such a lost chance. But I was angry enough with myself and that spirea bush to dig it up with my teeth. I tore off a twig and poked the snow out of my peep sight. The cave failed to interest me now,

Hanging in a tasteful drape against a fir tree was my cougar, dead. I could have kissed his tan-colored nose.

When I got home and plopped him on the kitchen floor in front of encouraging wife the good woman marvelled in an approving manner. "My cougar!" she exclaimed.

"How come, yours?" I demanded, mystified.

"My snare what got him, wasn't it?" she retorted. "You said the buck and a half it cost was coming out of my slice of the bounty money, so it's my snare and my cougar!"

"What about me?" I wailed. "All my worry, research, thought, skill, anxiety. . ."

"Oh, you!" she said. "For you it's enough to be instrumental in saving fifty deer a year. That should be enough!"

So I guess it's got to be.

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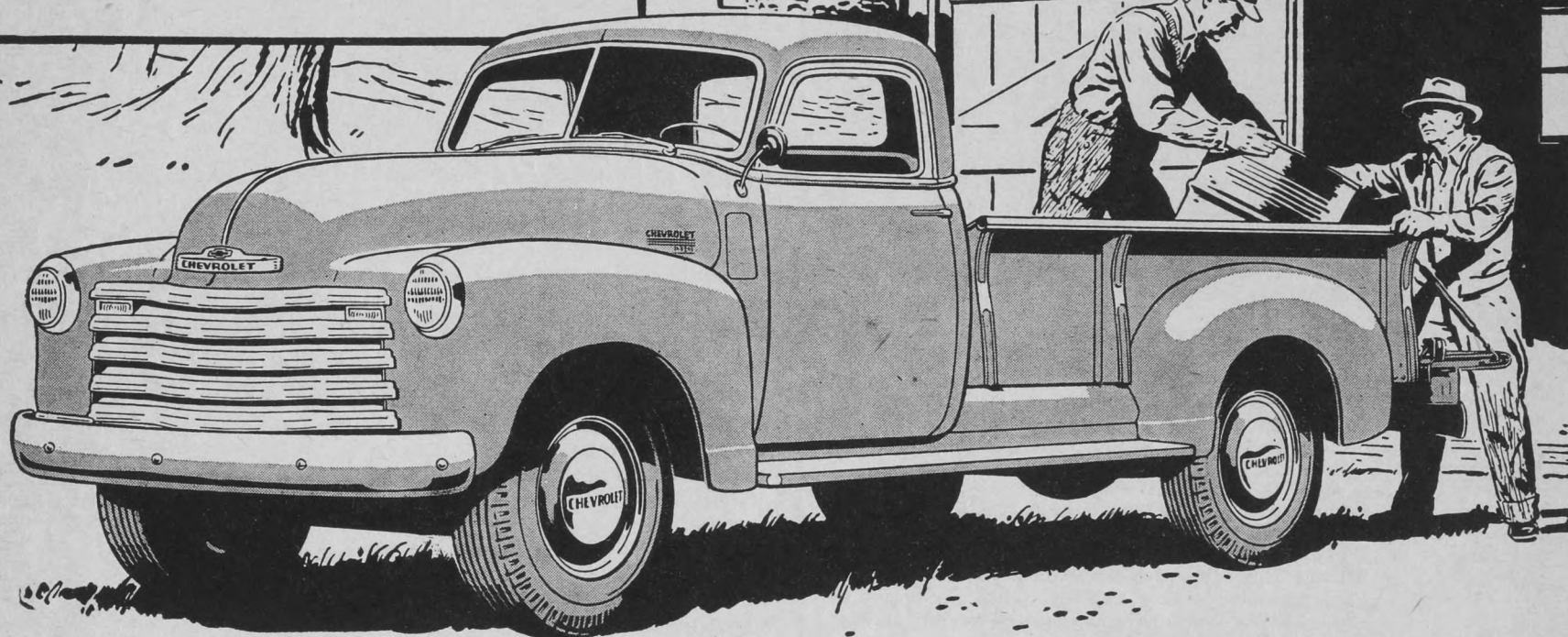


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HOW TO GET BIGGER "PORK PROFITS"

Repeated tests have proved that most hog raisers can increase their pork profits by following the 6 proven methods of swine management outlined below. They are not hard to follow, yet they pay big dividends.



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2. HAVE HEALTHY, HUSKY PIGS. The growth and development of the unborn litter call for proteins of good quality and for minerals and vitamins in proper proportion. Feed Miracle Brood Sow Ration to your sows from breeding time to farrowing and you'll seldom have trouble with sickly pigs.



3. GET GOOD EARLY GAINS. With proper management, and feeding Miracle Brood Sow Ration, the average weight of your pigs at 8 weeks should be about 40 lbs. Start feeding suckling pigs Miracle Hog Starter, dry, in creep, at about 2 weeks old. Continue until 60 lbs. Give pigs all they will eat in every feeding.



4. GET TO MARKET WEIGHT EARLY. With the right feeding you can have your hogs averaging 200 lbs. in from 5 to 6 months and ready for early marketing. When the pigs weigh about 60 lbs., start feeding Miracle Hog Grower 3 times daily as a wet mash. Feed as much as they can eat. When the hogs are about 110 lbs. change over in a gradual way to Miracle Hog Finisher and feed in the same way.



5. MAINTAIN SANITATION. Keep the hog house or farrowing pen, all swine equipment, and the pigs CLEAN. This will prevent infestation of the common roundworm, losses from parasites, and other profit consuming diseases.



6. SAVE FEED MONEY. True economy does not mean "skimping" on feed. It means turning feed into pork without waste of time or feed. This can only be accomplished by supplying the right feed in the right amount at the right time for each class of animal. By following the method of feeding suggested in the steps above, and

combining this with good management and sanitation, you should be able to produce 100 lbs. of pork, on the average, from no more than 400 to 475 lbs. of Miracle Hog Feeds.

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MONTHLY

Some Observations From Britain

(The writer of this MONTHLY COMMENTARY has been spending some time in Great Britain and on the Continent, and furnishes some comments as the result of inquiries there.)

London, May, 1950.

It is possible to see, on this side of the Atlantic, perhaps in better perspective than at home, some of the problems that face Canada in the future marketing of wheat. These have been visible for some time, as we have been steadily approaching them, and now they are actually at hand. It seems probable that the merchandising skill and energy of the Canadian Wheat Board will be severely taxed during the next few years.

First in importance of these problems is finding new markets, or rather recovering old ones, so far as they can be recovered. That is because it is unlikely that Britain will continue to buy Canadian wheat as extensively as was the case during the war and during the past few years. Whatever may have been said in criticism of the prices provided under the wheat contract between Canada and the United Kingdom, it provided an outlet, during the four-year period to end on July 31 of this year, an assured outlet for a total of 600 million bushels, or an average of 150 million bushels annually, to which were added some millions of extra bushels, to make up for the fact that some of the wheat was provided in the form of flour, and the British claimed some extra quantities to make up for the milling by-products therefrom, which did not reach them. Such quantities are far in excess of what Britain took from Canada during pre-war years, and also of what Canada is likely to furnish in the future, whenever millers are able to return to their former practice of blending wheats from Canada, the United States, Argentina, Australia, and on occasion from other sources. There are special reasons, beyond ordinary milling practice, which will tend to accelerate a change in British buying, and we shall come to those. The all-important fact is that we must face the prospect, if not for the coming year, at least very soon, of seeing British consumption of Canadian wheat decline by 50 million bushels annually, and perhaps more, and must find outlets to compensate for that fact.

That will not be easy, for two main reasons. One is the problem of payment, for most European countries are short of dollars, and as long as that deficiency is made up by the United States under its European recovery plan, the tendency will be to buy in the United States rather than in Canada. Two important exceptions are Switzerland and Belgium. The other reason is that most countries have got out of the habit of using Canadian wheat. It can now be seen that necessary and desirable though it may have been for Canada to supply such large quantities of wheat to Great Britain during a period of emergency, this country did so only at some considerable sacrifice to its long-term interests.

Former good customers have got out of the habit of using Canadian

wheat, and it is not going to be easy to get them back into that habit. At times during the past four years when they were able and willing to buy Canadian wheat, various countries felt that they were to a certain extent being ignored by Canada. It does not appear that any actual ill-will was thereby engendered, for during periods of emergency everyone recognized that conditions prevailing required extraordinary measures. But the good-will that used to prevail toward Canadian wheat has tended to disappear through lack of cultivation, and it is going to take time to re-establish it. Old-time commercial connections have been broken during the period of inter-governmental trading, and European governments have developed the habit of buying Canadian wheat only to a limited extent. In Belgium alone of European countries the wheat and flour trade has gone back entirely into commercial channels. How soon, if ever, it may return in other countries will depend in part upon the development of political ideas, and the extent to which these are more or less socialistic. But it will also depend upon the rate of improvement in the economic position of various countries, and the extent to which these can lift restrictions upon imports, imposed for the purpose of protecting their position in respect to monetary exchange.

* * *

Speaking of good-will, that exists toward Canada to an unbounded extent in Great Britain, and is constantly demonstrated both in public and in private. It was shown, for example, in references in the House of Commons to the Winnipeg flood disaster, and by the prompt opening of a relief fund, to which there is evident desire to contribute, although the difficulties of sending any financial help under present conditions are almost insuperable. It was shown by cheers at a Mansion House dinner when the name of Canada's Minister of Trade and Commerce, the Hon. C. D. Howe, was mentioned by a government spokesman during a Mansion House dinner on the occasion of the opening of the British Industries Fair. True, the average citizen has very little realization of the extent to which the United Kingdom relied on Canadian food supplies during recent years. The tendency has been to regard the supplying of food as a governmental responsibility, without paying too much attention to where the food came from. But members of the flour and produce trades do realize the importance of Canadian supplies, and as far as one can judge, feel an obligation to remember that in future, when they can usefully do so.

* * *

But in spite of all good-will toward Canada, the dominant consideration among those in controlling positions is the financial position of the United Kingdom. This reference is not to internal financial problems, which are serious enough, but consideration of which tends to be deferred, but to the external problem of improving the exchange position in terms of dollars, and making sure that no further devaluation of the pound may be

COMMENTARY

required. The recent devaluation is recognized as having been necessary, and believed to have been beneficial, although some adverse effects in higher prices and increasing living costs are beginning to be felt. There is strong determination to avoid another such step, and quite evidently widespread confidence that it can be avoided. But there is equally strong belief that it will take strenuous efforts to build up the country's dollar reserves to a point where they will be considered safe, and will continue to inspire confidence. Those efforts, in part, take the form of attempting to expand exports to dollar and gold standard countries. But just as important, they take the form of restricting dollar imports, whether those come from Canada or from the United States. We shall deceive ourselves if we fail to recognize the strong determination of the United Kingdom in this respect, or think that it will be easy to sell in Great Britain all we think we should sell, or anything this country can obtain from the sterling area, or from "soft currency" countries.

* * *

This, perhaps, is the place to interject a word as to the need for Canada developing every possible agricultural export to the United States, as some offset to shrinking, for some time at least, of former exports to Great Britain. Cattle and beef exports south of the line, to the greatest possible extent, should be encouraged even if that means making beef scarce and expensive to Canadian consumers, and some enforced switch in Canadian meat-eating habits from beef to pork. An enlarged domestic pork consumption may be desirable to make up for shrinking bacon exports to Great Britain, and a reduced Canadian consumption of beef will not hurt so long as an outlet can be found in the United States. Similarly the export of malting barley and of high grade oats south of the line deserves every possible encouragement.

* * *

The food situation in England has vastly improved during the past year. So far as total quantity is concerned there is food enough for all, and the queuing up at food shops for a share in scarce supplies has practically disappeared. Many commodities have been made free of rationing, the most important exceptions which trouble housewives being meat and sugar. Both potatoes and bread are very plentiful, and in fact the principal complaint about the diet is that meals consist too preponderantly of these two items. Lamb, largely from New Zealand, appears to be in fair supply, but beef is almost unheard of. That is



due in part to some scarcity of beef in the Argentine, but mainly to the fact that negotiations for a new beef contract with Argentina have been hanging fire until British and Argentine ideas as to price can be reconciled.

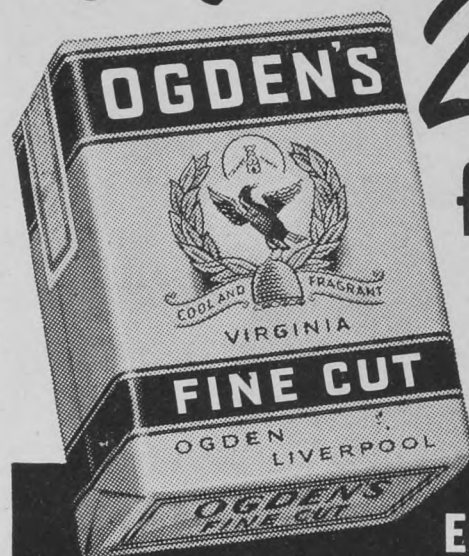
To a Canadian, familiar with the recent cancellation by Great Britain of former arrangements for buying Canadian eggs, it is almost startling to find eggs plentiful. They are now quite unrationed, with large quantities displayed in the shops. The egg situation illustrates several facts about food. One of these is that the business of furnishing it is still highly competitive, and that it is dangerous to think now that any one source of supply is necessary. Next it illustrates a large increase in the productivity of British agriculture, for a large part of the current supply has come from British farms. Next it illustrates, in part, the present tendency here to buy food when possible from non-dollar countries, for great numbers of eggs have been bought on the continent. Then there is the fact that food is being subsidized.

The ministry of food buys eggs from farmers at more than four shillings a dozen, and then sells them to retailers on a basis that permits them to be sold to consumers at from sixpence to a shilling less per dozen. The same principle is followed in connection with a great many foods. For example, if subsidies were to be taken off flour and bread it is calculated that bread prices would be from 75 per cent to 100 per cent higher. In that fact lie some of the most serious problems to be faced in the future. To provide money for food subsidies strains the financial resources of the government, and is one of the causes of back-breaking taxation. But to do away with food subsidies would be to permit the cost of living to rise to an extent that would bring about fresh demands for higher wages.

Next to be noted is the fact that many of the eggs in the shops come from Poland, illustrating the fact that the government has no hesitation in doing business with countries behind the iron curtain and under Russian domination. If there was any former reluctance to undertake such transactions, it has been overcome by what is considered to be the pressing necessity of buying from countries which do not need to be paid in dollars. That was also illustrated by recent purchases of some considerable quantities of feed grains from Russia.

And then this problem presents itself in eggs, as with many other commodities. The British farmer is today being paid more to produce food than the consumer can afford to pay . . . Does that fact represent a temporarily unbalanced situation, with the balance later to be restored either by reduced returns to farmers, or by higher costs to producers? Or does it in fact represent a new principle in the production and distribution of food which may become both permanent and more widespread? For the present it also applies to wheat produced in Canada and consumed in Britain. That fact will require some study, before we can be sure of the outcome.

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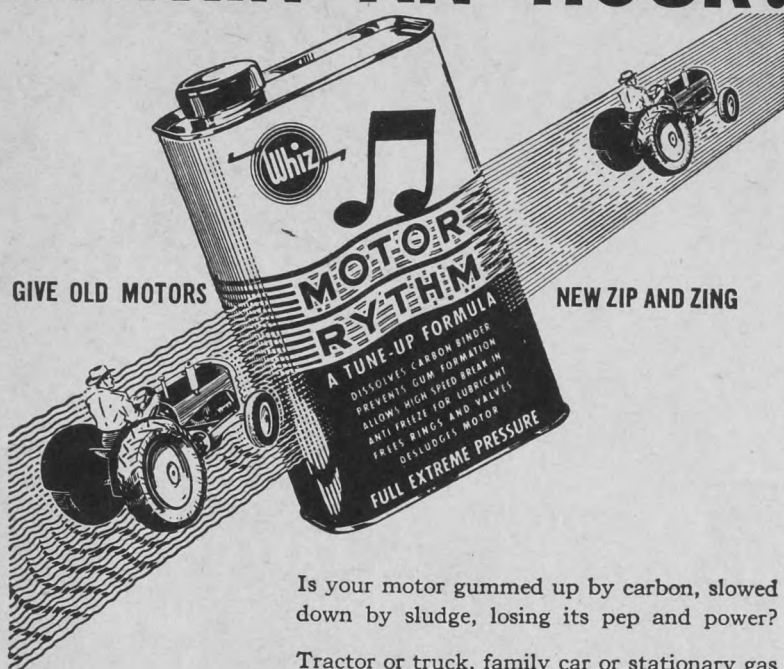
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No One To Trust

Continued from page 12

The horses climbed a steep rise. A log cabin and barn were in a small, sheltered clearing. There was no worn trail to the door, only the faint pathway through the trees, as though people did not often come there.

THE interior of the shack was neat and clean. There was a stove, a wooden table and a homemade bunk. I noted with surprise the guitar hanging from a peg in the wall, the radio beside the bunk, and on it the photograph of a girl. I stood before the photograph while he opened the beans and set two tin plates at the table. There was a vague similarity between him and the girl in the photo. "Your sister?" I suggested.

"No. Only someone I knew a long time ago."

Sensing his withdrawal, I turned my attention to the guitar.

"Looks like a good guitar," I offered.

"It is. Do you play?"

"A little."

"Try it then." He was slicing bread after opening a can of beans.

I picked a few bars of "Home on the Range." The tone delighted me. Here was a different sort of instrument than the high school kids strummed in accompaniment to somewhat nasal cowboy songs.

He had put the beans on the stove to heat. He sat down on the bunk and I handed the guitar to him. Never will I forget what followed. His fingers worked over the strings, bringing out a lusty, rollicking air unfamiliar to me. Presently in a rich baritone voice he sang:

"I'm bound away, this very day,
I'm bound for the Rio Grande . . ."

The lilt of the song brought an expression of merriment bordering on devilry into his eyes, and he looked younger than before. He seemed lost in the memory of something irrevocably past, for the merriment faded and there was a sadness in his eyes as he finished:

"Then fare you well, my bonny bluebell,
I'm bound for the Rio Grande."

He turned to me inquiringly. "Like it?"

"Yes. I've never heard anything like that before."

"That was a sea chantey. Sailors sing them while they work. The rhythm makes them move together at jobs like weighing anchor or sheeting topsails."

"Were you a sailor once?"

"Yes." He said no more, but his eyes darkened with remembering. I was fourteen, half woman and half child, and something of my heart was claimed forever by the fascination of that lonely face.

"You are very fond of sailing," I said.

"How did you know?"

"I could tell by the way you said yes."

He laughed but his eyes were serious. "You are very much like someone I used to know," he said.

"Like her?" I nodded toward the picture.

"Yes. Like her."

"What was her name?"

"Phyllis."

"You knew her when you were a sailor?"

He looked at me searchingly. His grey eyes had read many faces. I do

not know how much he saw of my new-found heart or of the friendship he had won without asking. He too must have sensed the strange affinity of our natures. At any rate, he chose to answer me.

"I knew her before that. We grew up together."

"Where?"

"In a fishing village in England."

I realized now that the resemblance between him and the woman in the picture was not a family likeness but a similarity of background and breeding.

"Why did you stop sailing?"

"It wasn't my choice. As you say here, I got my walking papers."

"But it wasn't your fault?"

"If you can prove that you're a better man than I am." His grin was lopsided.

"She didn't think it was your fault?"

"I wouldn't know. I didn't see her afterwards."

"You didn't leave without seeing her?"

"I came to Canada. Phyllis was a thoroughbred. She wouldn't have tolerated disgrace."

He was looking at me intently. For an absurd moment it seemed that I was Phyllis and he was asking what he had not dared ask then. I thought of something I'd overheard once in a grown-up conversation . . . "a man needs someone to trust him."

"I am sure she would have trusted you," I said.

"Thank you." He turned away abruptly. "Now shall we have our dinner?"

We ate in silence and it seemed we had scarcely finished when he said: "Well, Mavis, you're quite a way from home. I think you had better run along now or someone will be worried about you. Come and I'll help you bridle your horse."

I DID not want to go home but I rose and followed him out to the barn. We did not speak until he had bridled Vixen and brought her out for me to mount. I did not want this to be the end.

"I will come and see you again," I said.

He looked startled. "No, Mavis, you must not come again, ever."

"Then you will come and see me?"

"No, Mavis," gently.

My pride melted before the grey sadness of his eyes.

"But why?"

"You see, I am a very bad man. If people knew you were my friend you would shortly have no others."

Impulsively I touched his hand. "I will never believe that you are a bad man, no matter what they say."

"Thank you, Mavis. Goodbye."

I swung into the saddle and Vixen pranced, but I could not go just yet. I turned to him again. "Please," I faltered, "what is your name?"

"Jack Dunn."

"Jack Dunn! But I . . . but I . . ."

"You thought Jack Dunn had horns and a tail, didn't you?"

He was laughing, and I laughed too. "Maybe so," I said, "but I've found there's more to it than that."

"Well, you'd better go before I turn into an ogre and eat you up," he grinned. So I left him.

Now the things I had heard about him crowded in on me. Jack Dunn, bootlegger, renegade, outlaw. If Mom knew I'd had dinner with him her hair would stand on end!

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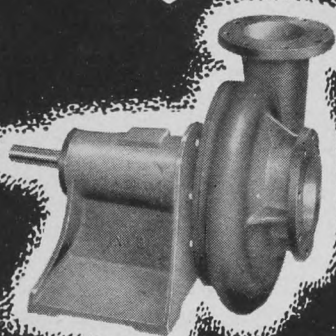
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Something made me fiercely want to protect him. I would explain to Mom and Dad how they had been mistaken; how they were shunning a man who was good, fine and cultured in a way they had not realized. Then they would invite him over for Sunday dinner, and he would sit on the porch and visit with us and with the neighbors who dropped by to chat, and that awful loneliness would disappear from his eyes.

As I scrambled back over the hills to the world where black was black and white was white, I could see that it would never do. You couldn't say, "His horse and his dog love him, and he can make magic with his guitar." Mom and the ladies who sat with her in the white church on Sundays would raise their eyebrows and say in a scandalized whisper, "but he makes homebrew and sells it to the Indians!"

Jack Dunn did not enter into the explanation I gave at home for my lengthy absence, but he entered often into my thoughts. He became something of a hero to me, maligned, misunderstood and completely honorable.

WITH the summer holidays, the nine o'clock curfew was lifted, that I might enjoy the long summer evenings. One night after the evening chores were finished a strange restlessness possessed me. I headed Vixen over the hills and guided her down the narrow path through the poplars. I did not intend to see Jack Dunn again. I had not forgotten his warning that I must not go there, yet I wandered the hills for the sense of being near my friend.

I rode until I could see the little cabin through the trees and the pale lamplight dimmed by the silver moonlight that bathed the out-of-doors. I could hear a horse champing the grass by the shack. I held Vixen with a snug rein, lest she move out of the shadowy trees or betray our presence by nickering to the other horse. Then the horse by the cabin moved out into the full moonlight. It wore a bridle but no saddle. It stood there pathetic and gaunt, with its head down. Beyond a shadow of a doubt it was an Indian cayuse, and its owner was in the cabin with Jack.

I rode swiftly away. Of the ride home I recall only the unexplainable sobs that tore at my throat and the tears, hot on my cheeks.

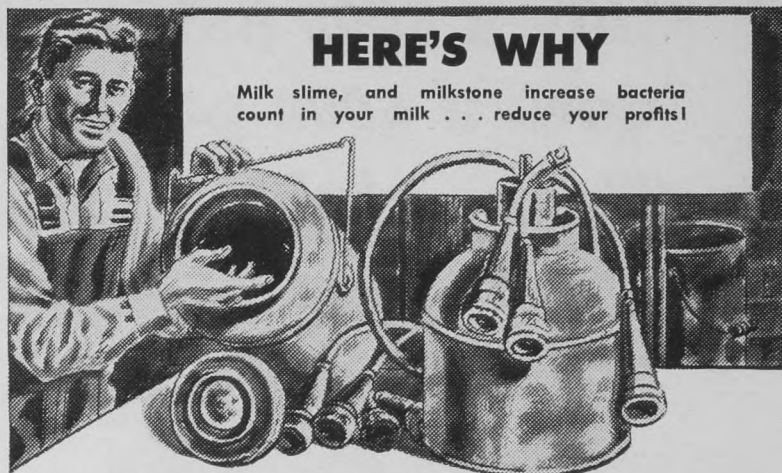
That was the summer of '39. War broke out in September. With early winter came the rumor that Jack Dunn had left the hills. No one knew where he had gone. At Christmas I received a card postmarked Esquimalt, B.C., with a street photo of Jack in naval uniform. He did not give his address. I wanted to send him some cookies.

It was good to think of Jack at sea again for it always hurt me a little to remember him sitting in that landlocked cabin, singing sea chanteys as though they were love songs.

There was a card each Christmas until the war ended. Then I heard no more of him. I wondered sadly if he had slipped back into his old way of life.

Two years later I received an envelope postmarked in England, with unfamiliar stamp and feminine handwriting. Inside was a small photograph of a smart-looking couple, no longer young, but definitely charming. On the back was written, "Thank you so much for everything. Jack and Phyllis Dunn."

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An Explanation of Devaluation

The relationship between devaluation, prices, gold and national bankruptcy

EVER since Sir Stafford Cripps announced the devaluation of the British pound from its official price of \$4.03, to \$2.80, on September 18, 1949, we have heard considerable talk about this important step and its effect on general world prosperity. Amid all the talk and discussion incidental to devaluation, there has been comparatively little of clear explanation suitable for the man on the street, or the man on the farm. Three Cornell professors, Messrs. Pearson, Myers and Kearl, of the Department of Agricultural Economics, New York State College of Agriculture, have prepared and published a fairly extensive treatment of the event and its significance. From this material the following has been very greatly summarized:

"Devaluation," they say, "is an admission of bankruptcy. Winston Churchill of the opposition aptly expressed this when he referred to England's predicament in the following words: 'It is because we are now brought to the verge of national . . . bankruptcy . . . that this emergency session (of Parliament) has been called'. When nations get in difficulty they devalue their currencies, and the world's history is strewn with broken promises and uncounted devaluations. England's history is no exception. Hers has been a succession of crises and devaluations down to the present, and they probably did not end with the 1949 devaluation.

"The pound sterling, which was once both a pound and sterling, is no longer a pound, nor sterling. At the time of the Conquest, 1066, the pound was a pound, 5,400 grains troy, and it was sterling, 92.5 per cent silver. Since then the content of the 'silver' pound has been changed 17 times. The pound was devalued by reducing its weight and/or by changing the percentage of precious metals in it. For instance, in 1527, Henry VIII reduced its weight from 2,880 to 2,560 grains, but did not change its silver percentage. In 1545 he did not change the weight of the coin, but reduced the silver content by reducing the silver percentage from 83 to 50 and increasing the percentage of base metals from 17 to 50."

Under George III in 1816 the silver pound disappeared and was replaced by the gold pound. Since then the content of the gold pound has been changed three times—in 1919, 1931 and 1949. The two devaluations in 1931 and 1949 were of major proportions and their combined devaluations were about equal to the 16 devaluations of the silver pound between 1066 and 1816. In other words, the silver pound lost 66 per cent of its original silver content in 550 years, while in a little over 125 years the gold pound lost 66 per cent of its original content. In each devaluation, 1931 and 1949, the pound was devalued approximately 30 per cent.

THE professors go on to explain that "the devaluation of a currency is, of course, nothing more than changing the price of gold. . . . A 30 per cent devaluation is equivalent to about a 44 per cent advance in the price of gold. . . . As a matter of fact, other things being equal, prices

should rise by the percentage increase in the price of gold and not in proportion to the devaluation."

They then proceed to discuss both the true and the assumed causes of devaluation:

"There are many erroneous explanations of the causes of the devaluation of a currency. The more common ones are (1) it is a method whereby a nation can gain a permanent or temporary advantage over other nations, and (2) it is a method whereby the princes, kings and rulers rob the people.

"The first of these, that by devaluation one nation can gain an advantage over other nations, is so naive that it hardly deserves consideration. If nations could gain a permanent advantage by devaluation of currency, as this modern explanation states, it would not have taken them so long to find it out. More of this later.

"The second erroneous thesis, that devaluation was a method of robbing the people, is age old and has been fostered by the clergy, historians, public officials and economists. The Bible contained many quotations which were so interpreted. Moses and Solomon continually impressed their followers with abhorrence that the Divine Mind had for unjust weights and measures. Proverbs tell us, according to the King James version, 'A false balance is abomination to the Lord; but a just weight is his delight'.

FARMERS, businessmen, traders and the like were much less opposed to devaluation than those on fixed salaries but their views were not aired on the public platform nor in print. There was, however, no lack of comments by public officials, economists and ministers of the Gospel. They had just one explanation of the effect of devaluation—it raised commodity prices and thereby robbed the poor people. The only way to rob the Orphan Annes, old widows, the down-trodden third and the more vociferous fixed-income preachers, professors and public officials, was to raise prices. The latter group were always outspoken in the interests of the down-trodden and no less interested, but less outspoken, in their own behalf.

"The subject of devaluation, of course, needs more comprehensive consideration than it has received at the hands of the clergy, historians, economists and other fixed-income groups. Historically, nations have devalued their currencies because their coins were unstable, or because of financial difficulties. The primary causes of financial difficulties of nations have been war, declining commodity prices, high costs of production, and rigidities in their economies.

"Because of its frequency, war has been the most important reason for nations getting into financial difficulty. The history of England sheds some light on this question. Devaluations of the English 'silver' pound from the time of Edward I in 1300 to Edward VI in 1551 may not have been due solely to wars, but were certainly associated with them. The devaluation of Edward I in 1300 was preceded by the Conquest of Wales, 1277-1295. The four devalua-

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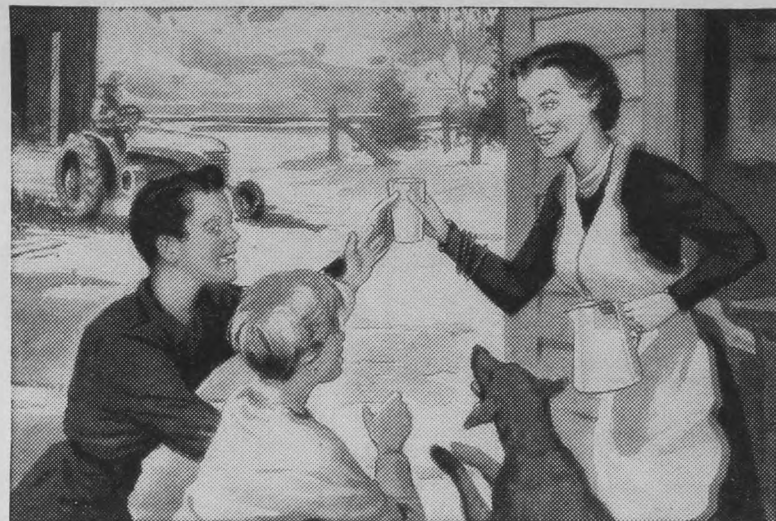
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tions of Edward III and Henry IV occurred during the Hundred Years War from 1337 to 1453. The devaluation of Edward IV in 1464 came at the close of the Civil Wars, 1462-64. Henry VIII lavished wealth and lives in war but gained nothing and devalued the currency three times from 1527 to 1546. Wars with Scotland, 1542-47, and with France, 1544-46, may have been a contributing cause to the devaluation of Edward VI in 1549 and 1551. The devaluation of the gold pound of George V in the early 1930's was a result of World War I and the great deflation of the early '30's. The 1949 devaluation was not due to the chicanery of George VI, or to socialism. It was an aftermath of World War II.

"When nations become embroiled in wars they deplete their productive capital, pile up huge debts, and devaluation is inevitable. It takes more than average ability to borrow money, invest it in a productive enterprise and repay the interest and principal. It is well nigh impossible to loan money on an unproductive enterprise and ever hope to get much interest, let alone collect the principal. War forced the ancient, medieval and modern nations to borrow large amounts of money. Since wars are likely to be unproductive, the debts are not paid and must be reduced or eliminated. The time-honored method was, and still is, to devalue the currency. In the early days the king called in the coins of the realm, reduced their weight and paid a part or all of the debt with the new, more numerous, lighter and less valuable coins. The devaluation raised commodity prices and decreased the purchasing power of the debt at the expense of the creditors. In modern times the methods are different, but the results are the same. Since there are now few gold coins in circulation, nations merely state that their outstanding paper money represents less gold than formerly.

"THE extent of the devaluation caused by wars may be moderate for the victorious nation, or may end in wild inflation for the defeated ones. The Confederate States lost the war between the states and the debts and currencies were buried in wild inflation. Defeated Germany had wild inflation in 1922 and 1923 and defeated China in 1948 and 1949. Sometimes the currency of victorious nations is 'not worth a continental' and that was what happened in the Federated States during the Revolutionary War, 1775-1781.

"The British 1949 difficulty was due in part to a world-wide decline in prices and a decline in the volume of her high-priced exports, as the sellers' market waned and the buyers' market waxed. England's export prices have been notoriously high. Her textile industry is a case in point. Wholesale prices of textiles in the United Kingdom in terms of sterling were much higher than those in the United States in terms of dollars. The 1949 indexes were 321 and 190 respectively when 1937 is equal to 100. When the value of these textiles was expressed in terms of raw materials, the cost of living or wages, England was still at a disadvantage. England could not expect the world to continue to buy her relatively high-cost export items when lower-priced goods were available on the world buyers' markets."



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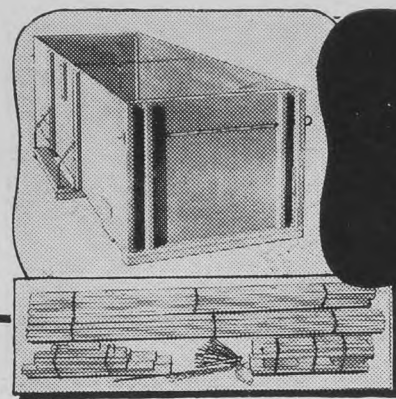


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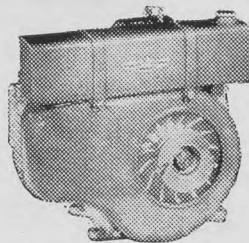
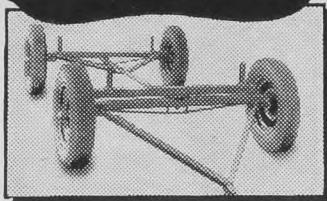
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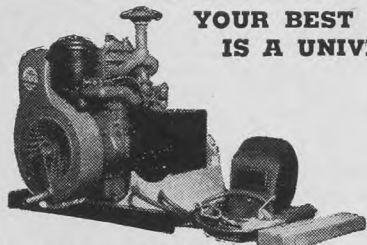
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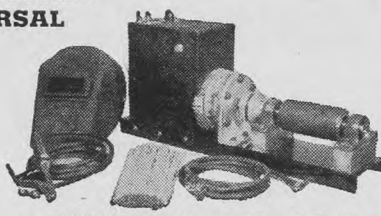
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Bob Brown's Hired Man

B. J. O'Neill recounts a Peace River frontier tale with a moral

I HAVE never farmed in the Peace River country, but old Bob Brown has. And to listen to him, one is led to believe it's a great country. "Never no crop failures," says old Bob. "Cabbages this big," as he circles an imaginary one with his long arms. "And pea pods the length of my arm," he says, sticking one of them out full length.

But what old Bob likes to talk about is the "bear," as he sits puffing the evening away with his old pipe.

It was coming on to harvest, he'll say if there's someone new around who hasn't heard it yet, and I was sitting out on my front steps puffing away at this very same pipe. The yard would be filled of a quiet evening with the smoke from my own leaf tobacco. Yes, sir, I grew my own in the Peace River country.

Well, to make a long story short, I was sitting puffing away and thinking about the good harvest coming up. Suddenly I noticed a large bear sitting up on his hind legs at the edge of the spruce clearing, and sniffing the tobacco smoke. He stood there sniffing for a while, then walked off back into the timber.

I thought nothing of it at first. But every evening after that he'd come back and sniff some more, as the smoke would drift over to the spruce edge.

It was shortly after that I noticed large tracks through my tobacco patch down in the garden, and a few leaves would be missing each time. I couldn't understand who else would be interested in my tobacco besides myself, when suddenly I thought about the bear sniffing at my tobacco smoke. Maybe he was getting fond of it too?

That fall when I had stored the vegetables all away, and there was nothing more for the old fellow to steal I thought the fun was all over. However the bear hung around the edge of the yard watching me go about my chores, pumping water for the cattle, and carrying hay into the barn for the stock. I knew he was interested in these things because when he'd see me throwing manure out of the barn, he'd laugh and shake his head.

That's why I started leaving some tobacco out on the front step at night for him. In the morning it would be gone. I intended to keep this up as long as my supply would last, because I was really beginning to like the old boy's company.

EARLY that winter I was in bed with a bad touch of the 'flu. The barn was full of cattle and my driving-team. For two days I lay in bed unable to get up. On the third day I heard a noise out by the barn.

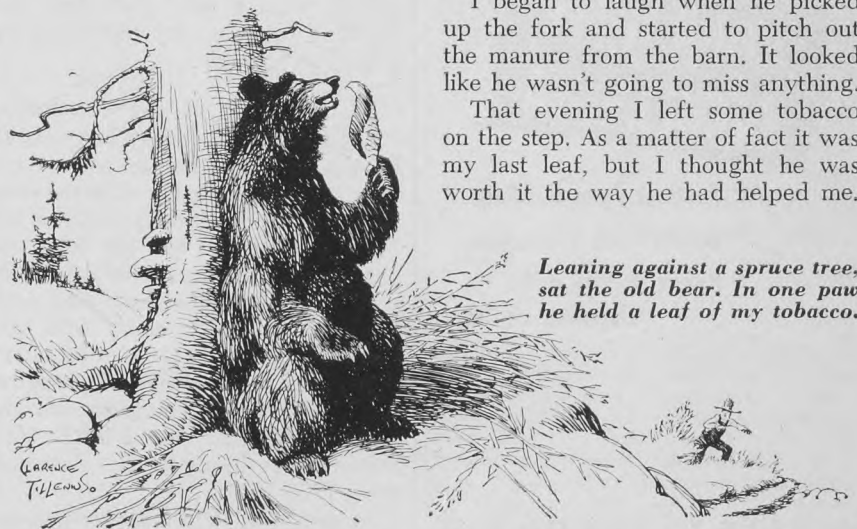
I got painfully out of bed and went to the window.

At first I thought I was still delirious when I saw the bear turning the cattle out of the barn and driving them to the pump. Yes, sir, he stood there for a full half hour pumping away. Then he drove the cattle back and took out the team.

I wrapped myself up real good and sat by the window. I just could hardly believe my eyes as the bear led the team back and put them in the barn. Then he went to the haystack and carried in an armful of hay that looked like a small ton. He made two trips like that to the haystack. Then he dusted off the foxtail with his big paws from his hairy coat.

I began to laugh when he picked up the fork and started to pitch out the manure from the barn. It looked like he wasn't going to miss anything.

That evening I left some tobacco on the step. As a matter of fact it was my last leaf, but I thought he was worth it the way he had helped me.



Leaning against a spruce tree, sat the old bear. In one paw he held a leaf of my tobacco.

Well, that very day I followed those tracks all the way down the stubble field, to see where he was carrying it to. When I got down to the very end, I could see some oat bundles carried off into the thick spruce, so I followed the trail. A little way into the timber I could see a large bed made out of my bundles, and sitting on it leaning against a spruce tree was the old bear. In one paw he held a leaf of my tobacco. He sniffed it, then swallowed it in a single gulp. Afterwards he smiled and shook his head from side to side in satisfaction.

I had always been kind of lonely, being an old bachelor, and the neighbors being far away. So I decided to let the old fellow have his fun.

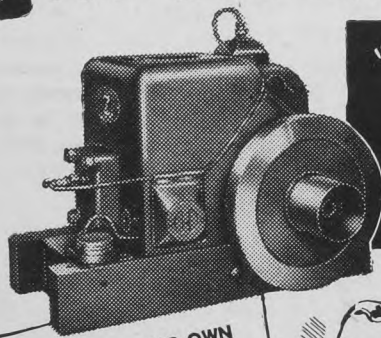
But my great sorrow was coming, because the next morning as I opened the door to go outside for the first time in three days, to see how things were coming along, there was the old bear lying dead on the step.

I was sorry as I skinned him that day. And as I worked over him I could feel his belly was very hard. When I opened it up, there, layer, after layer was all my tobacco. Must have been a hundred pounds.

Yes, sir, I believe that's what killed him, as a load like that must have been pure dynamite.

I took that tobacco and dried it out real good, and it had the best flavor of any brand I ever smoked. Anyway I was right out of the stuff. What would you have done?

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The Countrywoman

AT the moment of writing, at the close of May, much later than is permissible for usual handling of The Country Guide copy for the next issue, a few thousands of Manitobans are making their way back to homes from which they were evacuated. Some had left because the turbulent and muddy water of the Red River in spring flood had moved in and occupied or isolated their houses and places of business. Others had been ordered out for safety reasons by police or army authorities. They had left sadly and reluctantly. They return anxiously to observe the extent of damage to their homes and possessions.

Patients are now being returned from Alberta and Saskatchewan hospitals, where they were afforded kind refuge, when Manitoba's hospitals were either flooded or endangered by rising waters held back by dikes which might have given away at any moment. There is much activity around buildings, highways, bridges and rail lines where the water has receded. Emphasis has now switched to rehabilitation, sanitation, clean-up and repair programs.

No estimate is yet available of the number of people who were forced to leave their homes in cities, towns, villages and farms nor how great has been the damage to buildings, equipment and furnishings in the Red River Valley. In the early stage, the evacuees from town and country points flocked to Winnipeg. It was shortly realized that the city would not be able to contain its normal population as section after section of residential areas were threatened by the flood menace. Then came the appeal from army and government for Winnipeggers to leave voluntarily and in some cases the outright order to evacuate certain areas. Competent observers have said that the orderly exodus of over 100,000 people from Winnipeg was "one of the biggest evacuations in the history of North America, and that an amazing thing about the movement was that they went not to specially established camps but instead to homes of relatives, friends or kindly strangers."

All of Canada now knows the story of the 1950 Red River flood. Press, radio, telegraph, cable, photographers and films rendered invaluable service in making that story known at home and abroad. It has been "big" news for the past four weeks, though perhaps many failed to note its beginning and significance when little towns and farm lands went under water as early as April 18.

A quick and warm response came from the rest of Canada in letters, telegrams and personal radio messages offering sympathy and hospitality, supplies and financial aid through the Manitoba Flood Relief Fund. The greatest airlift in Canada's history brought needed sandbags, engines, pumps, boats and other items. From the United States came generous offers of aid, experienced personnel, Red Cross funds and other help. All Canadians were deeply touched by Britain's offer of funds or medical supplies and goods, coming as it did from people who themselves have withstood numerous disasters in recent war years.

Those who live in the Red River Valley were conscious of this great banking of sympathy and support and deeply grateful for it. We were aware of a great but invisible audience listening in to the hourly radio broadcasts, waiting anxiously for news of the cresting waters.

There is no gauge to measure the effort that went into the fight. The Red Cross disaster services worked alongside municipal helpers, police, armed service men, railway crewmen, trucking services, business personnel and individual citizens, whether that person was man, woman or youth. No one was left to stand alone. In Winnipeg it was estimated that over 50,000 citizens, ranging in ages from 10 to 70 years of age worked on dike defenses. Some communities had time to organize. When the appeal was made for further workers, they came voluntarily and worked long and dreary hours in spite of mud, snow, rain and chilling wind. Most of the dikes were handbuilt during evening and night

A great task of rehabilitation faces the people in the flooded Red River Valley —a Queen makes a gift to the nation

by AMY J. ROE

hours, by workers who came after a day in shop, office or factory.

There was the constant chatter of gasoline engines driving pumps to empty basements of houses and office buildings along Winnipeg's streets. The city of 350,000 population was fighting for its very life to maintain vital services: water supply, radio and telephone communications, transportation and sanitation. The disaster point of approximately 32 feet above datum was regarded as a definite possibility and plans were laid to meet it. If it came, the nerve centers of the city would be cut, and there would have been forced evacuation of all but essential workers under army command.

The crest of the flood was reached on varying days at various points along the Red River's 60-mile course between Winnipeg and the International border. There was uncertainty about its movement. It reached 30.2 feet above datum on Saturday, May 13, in Winnipeg; stood at that level for 23 hours and then began a slow recession.

Evacuees were warned not to return until their home areas were declared safe for habitation. Towns, villages and farm lands have been under water for a month. Each has its own story to tell of a struggle waged and lost. For example, the town of Morris was reported in a radio news item on May 29, to have only 30 of its 1,000 inhabitants remaining and as yet no dry spot in sight. This serves to remind us that the mayor of the town had requested on April 28 that federal and provincial governments declare Manitoba flood to be a national emergency.

Assurance of government aid has been given. Manitoba Flood Relief Fund will provide for the replacement of some home furnishings and equipment. It is a new experience for Manitobans to receive aid. The spirit of the pioneers of self-help is strong with them. Though much has been lost, some spiritual gains have come: a feeling of unity with others in a common cause; a knowledge that an all-out effort adds to the dignity and stature of the individual.

June

*June, brides' month, is the year's bride herself,
Poppy-silk gowned, baby's-breath her fine-mesh
veil,*

*Dreaming lilies in her hands; in fragile train
Colored stars and webs of morning-glories trail.*

*The wheat's green stretch of satin blades spreads
for*

*Her petalled feet; dew decorates the grass;
Delphiniums, petunias and pinks*

Bank lovely aisles where the bride will pass.

*Through green organ-pipes of maple-trees the wind
Swells out a soaring wedding-march, in tune
With merriest choirs of birds and bees, whose notes
All twine and join in bridal-song for June.*

—ANNE MARRIOTT.

Queen Mary's Carpet

THING of beauty was started in the dark days of the war. It was fashioned by the hands of Queen Mary, who, on May 26, 1950, celebrated her eighty-third birthday. In 1941, when no part of Britain was safe from the Nazi blitz, the Queen Mother set herself to the task of working needle-point panels and a border. The incentive which inspired its making was the love of England's craftsmanship.

The first of the 12 panels was completed in May, 1941, and the last about eight years later in 1949. All except one bears the signature "Mary R" with the date on which it was finished. The panels,

joined three to a row, with the added border made a rug measuring six feet nine and one-half inches wide by 10 feet two inches long. The completed carpet is now on an exhibition tour of six Canadian and 16 American cities. It was shown in Winnipeg, the first three days of May.

Queen Mary originally intended the rug as a gift to a member of the royal family but instead gave it to the nation. It is to be sold in America*to the highest bidder, in order to help earn more dollars, and so help Britain to purchase needed equipment and raw materials from this continent. Queen Mary has hoped by this means to set an example to her people by emphasizing the sacrifices needed to make the drive, to earn more dollars, a success. Bids for the rug will go directly to the Governor of the Bank of England. The only condition of the sale is that the carpet should find its ultimate home in some public institution in North America.

Queen Mary spent from six to seven hours a day working on the rug. Apart from the work of joining, every stitch of the rug was the work of her hands. At four stitches to the minute, it is estimated that it represents a million stitches. She also chose the delicate colors, taking special care to select just the right shade for each individual flower leaf in the design. In spite of her age, her eyesight is remarkably good. She threads her needle without the aid of glasses. She rises regularly at 7:15 a.m., and spends morning hours working at the needlepoint, while an attendant reads to her. In the afternoons, if she is not troubled with sciatica or going out to some charitable institution with which she is especially concerned, she again picks up her sewing bag and sets to work.

Queen Mary's interest in needlework goes back to the early thirties. A smaller rug which she made for her own use, is now in her drawing room at Marlborough House, London. In February, 1948, six chair seats which she had worked and given to a nursing organization, were sold in the United States for \$10,000, and are now on exhibition at the Metropolitan Museum, in New York City.

The Queen Mother owes her instruction in intricate needlework to the Royal School of Needlework, London, founded in 1872. It is here that the ancient art of embroidery, practised in Britain for 900 years, is taught to students qualifying as teachers of needlework. The school submitted the designs, based on genuine 18th century English tapestries and it was also given the task of joining the 12 separate panels and the border. Each panel has a different design. They show brightly colored birds, fruit and flowers as well as the gentlest pastel shades ranging from soft beige and grey backgrounds to pale blues, turquoises, greens, mauves and amber in the various patterns. The border is of single blossoms, against a grass green background and is edged in rich brown.

Accompanying the rug, came Miss Patricia Hardie, as guardian and Colonel the Hon. Angus McDonnell, as organizer of the exhibitions. Miss Hardie is a personal assistant to Lady Reading, head of the Women's Voluntary Services, an organization of 750,000 British women. On the occasion of her visit to Winnipeg, Patricia Hardie spoke at a luncheon meeting of the Canadian Women's Club. She pointed out that at the age of 82, Queen Mary has shown older people of the world that they still can make notable contributions.

"The W.V.S. in Britain today is endeavoring to cope with the problem of preventing old people, becoming a burden," Miss Hardie said. "Darby and Joan Clubs have sprung up. These clubs accept no one less than 60 years of age. Many such clubs, once established, are starting to run their own entertainments, musicals and pantomimes. The W.V.S. help by trying to find suitable and comfortable places for elderly people to live, where they may be surrounded by their own possessions and so feel at home. In cases where old people live on small pensions, have difficulty getting about or are ill, a mobile serving van calls and so they are assured of at least one good meal a day."



Wedding Gifts

by LILLIAN VIGRASS

JUNE is the month for weddings; and so, also the month for wedding gifts. You can make yours a welcome wedding gift if you give thought to the following ideas.

The first consideration is the bride's needs. These, in turn, will depend on the size and location of her future home. If the couple plans to live in a small two or three-room suite, as so many do these days when starting out, the choice of a gift will be very different from that chosen

for the couple moving into a large, rambling farm house. In the small home, even storage space is at a minimum, so cross off your list of ideas such articles as a silver tea service, which is only for special occasions and must be stored away between times. A comforter or a pair of blankets could be much more easily stored, and would be just as happily received.

If the couple intends to live in another section of the country, make the gift one that will not be likely to break en route. Mirrors, delicate ornaments and other articles which are bulky or difficult to pack may cause many a headache before the couple gets settled. If the distance is very great or incurs water travel, one should be even more careful in her choice. A linen shower would be far more appreciated than a china or kitchen shower in such an instance.

Find out, if you can, what the bride already has in her wedding chest. Then plan to purchase something that will go with what she has chosen. One of the nicest wedding gifts is a piece of the bridal couple's chosen design in china or silver. One teaspoon or one plate is not expensive, but it is welcome and will be treasured. Perhaps some of your friends would like to go in with you and give a place setting of silverware.

THE bride's taste in furnishings must be considered in selecting a gift. If you can think about her likes and dislikes, and forget about what would look nice in your own home, it will help to prevent you from buying such things as a vase that would look beautiful on your own mantelpiece but clash so badly in her home that it would be useless. However, if you are sure about the bride's taste in furnishings, you can always consider giving such articles as table lamps, bedroom lamps, mirrors and small tables. These are useful in every home, and not too expensive.

Handmade gifts are appreciated by almost everyone. But do make it a gift that will be useful. If the young couple is planning a home with modern furnishings even the most beautifully made antimacassar set would be entirely out of place. A handmade set of table place mats with matching serviettes would be very nice, or perhaps a set of several potholders—they are used in every home—and a frilly apron to match.

Electrical appliances are practical gifts if the young couple is fortunate enough to have a home

With some thought given to a suitable choice you may make your selection a welcomed one in the bride's collection

that is serviced by electricity. Some suggestions are: toasters, irons and coffee makers; and the more luxurious mix-masters, sandwich grills, waffle irons and electric tea kettles. A pressure cooker is also a very practical and welcome gift. The beginning of a set of long-wearing aluminum or stainless steel ware would be equally acceptable.

There are many useful things one can select for the bride's linen supplies. Pillow cases, sheets, face and bath towels, washcloths, comforters, blankets and bedspreads are always useful. The pastel-colored sheets and pillow cases are very pretty, and practical as well. They wash beautifully and are not much more expensive than the better-quality white ones. Brightly colored towels or towel sets make very special shower gifts. Almost any color will fit into the bathroom to make an interesting color scheme. A bride can use only a limited number of tablecloths and napkins. For this reason it is best to avoid these unless you have an idea what other gifts she is to receive. If you do select one as a gift, consider giving her one of the new pastel-colored ones which are so pretty for afternoon teas and buffet suppers. A place-mat set for everyday use is a modern gift, and is so gayly colored and easily laundered. It may be thoughtful to let the bride know where the gift was purchased, if you are in doubt about its practicality. Then if she receives too many, it can be exchanged for something that will be more useful to her.

Duplicates are unpleasant for everyone concerned. Gifts that are nice but become "white elephants" after several are received, include: casseroles, water sets, salad bowls, vases, trays, wall ornaments, salt and pepper shakers, teapots, and relish and cake dishes. To be sure that duplicates are avoided, the bride's mother could set up an individual bride's service. If she could keep an account of all gifts received, or about to be received, friends could contact her and thus eliminate a lot of the guesswork in gift buying. Showers, in particular, usually bring forth a large number of duplicates. If the group could plan together what each would buy, or if they could pool their resources and one or two could do the shopping for the group, it would do away with duplicates and make the gift a complete outfit.

Other articles are seldom thought of in connection with a wedding gift, yet they make very pleasing gifts. A pair of pillows is a welcome addition to the trousseau, or a kitchen clock, a mirror, a kitchen stool, or a large tray. A novel and very useful shower gift would be a collection of spices arranged in a rack or a group of the popular flavorings. A breakfast set makes a welcome wedding gift. Odd cups and saucers are very usable, and some of the new California pottery in those lovely rich shades would thrill any young bride.

To help you in your choice of a gift and to help the bride in furnishing her home, here is a check list of the basic needs for the kitchen, the dining room and the linen closet. Of course you must cut

down or enlarge on this to fit her specific needs.

Kitchen Needs: Can opener, fruit reamer, kitchen knife, paring knife, grater, potato masher, turner, spatula, plate scraper, vegetable brush, flour sifter, measuring cups and spoons, mixing bowl set, wooden spoon, rotary beater, two tablespoons, two teaspoons, shallow baking pan, casserole (1½ quarts), roasting pan (10 by 15 inches), square pan (eight inches), muffin tins, three pie plates, bread mixing pans and baking pans, frying pan and cover, two kitchen forks, salt and pepper shakers, breadboard and knife, coffee maker or percolator, two saucepans with covers, double boiler (1½-2 quarts), tea kettle, canning equipment, dishpan, six dish towels, six dish cloths, six pot-holders.

China and Glass: Six cups and saucers, six dinner plates, six smaller plates, six butter plates, six cereal dishes, six fruit nappies, one clay casserole, two vegetable dishes, two platters (one large, one small), one cream pitcher, one sugar bowl, one teapot, salt and pepper shakers, one water pitcher, eight tumblers, eight fruit juice glasses, eight soft drink glasses, two vases.

Silver: Eight teaspoons, six dessert spoons, six dinner knives, six dinner forks, six soup spoons, six salad forks, one carving set, one serving fork, two serving spoons.

Linen: Two luncheon cloths with matching napkins, two mat sets with napkins, or two breakfast sets with napkins, one table pad, two bedspreads, two pair blankets, mattress pad, pillow cases (two pair per bed), sheets (two pair per bed), eight face towels, four bath towels, eight face cloths.

THE right gift for a shower is one the bride needs and wants. For the tiny home, where there isn't space for a complete collection of kettles and pots, she might prefer utensils that can be used in several ways and are easy to store; such as, nests of bowls and utensils with short handles. "Cute" but impractical gifts will not only be seldom used but will take up valuable storage space. Consider giving a really good egg beater, a rolling pin, measuring cups and spoons, or a pair of kitchen shears. If the bride is to keep house on a farm, canning equipment will be appreciated or perhaps one might choose a large breadmixing pan or the complete set of baking pans.

If you choose a piece of kitchen equipment for a shower, get the best quality you can, even though this may mean a smaller article or fewer pieces. If a utensil comes in several materials, such as aluminum, enamel or other metals, try to find the kind the bride prefers. Standard utensils rather than novelty pieces will be useful for a longer time and will do away with the difficulty of differences in taste. Coffee apparatus is always a temptation to buy, but unless one knows the type the bride prefers, play safe and consult her first; or choose an article in which the models do not differ immensely in size, shape or method of operation.

Ease in using and cleaning are two very practical considerations in one's choice of a gift. If buying a kitchen tool, lift it to see if it is light in weight, feel the handle to be sure it is smooth and comfortable to use, and make sure all cutting edges are sharp. Look for such small things as rounded instead of square corners in a cake pan and straight up-and-down sides on cooking utensils, rather than pots with slanting sides which use up so much space on the stove.

Another shower possibility is for everyone to join in and buy a set of really good kitchen knives—the type that will hold an edge. A good knife sharpener would go well with them. But whatever you buy, let it be useful. Then you can't go wrong in your choice of a gift.



Summertime Preview

of yourself and good looks . . . details which make for a well-groomed appearance

by LORETTA MILLER



Lovely Wanda Hendrix, Universal star, depicts simplicity and care in grooming and make-up.

PREVIEW of a summer beauty. . . . Hair . . . shining with myriad lights and coiffed in the most becoming arrangement. Nails . . . smooth, well-shaped and expertly groomed. Polish . . . either natural and well-buffed or one of the light, dusty tones. Figure . . . trim, so trim because while one should not be underweight, neither should one have bulges or any excess to show in revealing summer apparel. Complexions . . . smooth, flawless and natural looking, without a trace of artificiality. Make-up . . . a sparing application of natural skin tones in rouge and powder and only a softly tinted lip rouge.

Nothing more than thorough and frequent washing and daily brushing is necessary to bring out the hidden lights of the hair. Regardless of the shade of hair, cleanliness counts first, then brushing, to bring out just enough natural oil to give the hair sparkle. There actually are no drab shades of hair because every shade can have sparkle and lights.

Nails must be kept well shaped and matching. Cuticle should be kept pushed back into shape, with excess trimmed off and sides of nails filed to give the fingertips contour. Nail surfaces should be kept or made smooth and shining by frequent buffings with a chamois buffer or the cushion of the hand. To cover up any slight irregularities of the nail, a light coating of clear nail enamel may be smoothed on. An emery board should be used for keeping nail edges smooth so they won't catch in sheer stockings. Cuticle oil or cream smoothed over and around the nails each night and left on until morning will do much to keep the nails strong and smooth.

In Regard to Posture

Summer clothes are most revealing so figures should be neat and trim if one is to look her best this season. Posture plays a big part, so learn to stand and walk straight and gracefully in order to hold in the abdomen and hold up the shoulders. The best figures are always those which are carried properly. Stand in front of your own mirror and examine yourself

critically. Hold in your abdomen and see how much straighter your shoulders look. Face your mirror, hold your shoulders back, and notice how your whole upper body line improves. Keep in mind that others view you critically, so check up on yourself every little while.

One wise woman I know kept several mirrors in her house and every time she came face to face with herself she was reminded to stand properly, not to frown, but keep the corners of her lips turned slightly up as though ready to smile. Her whole facial expression and figure were soon changed and this woman actually dropped years from her face and figure. (Sixty-four facial muscles are involved in a frown, while only 13 are used when we smile. Think of this next time you see yourself with an unattractive facial expression.)

Final Touches to Good Grooming

If you've never shaved the hair from your legs, don't start it now . . . or ever. Shaving off the little fine hairs only encourages a more abundant growth of coarser hair. But if a dark shadow shows through sheer hose, try bleaching these noticeable hairs. Here is a fine method that has proved very satisfactory: Place two tablespoonfuls of chalk of magnesia or cornstarch in a glass basin and to it add enough 17 or 20-volume peroxide to make a smooth paste. Then to this stir in two or three drops of ammonia. After cleansing the skin with soap and water, dry gently and smooth on the bleaching paste. Let the bleach remain on from seven to ten minutes, then rinse off with clear water. (The bleach is made into a paste only because a liquid would dry before it had time to really bleach. The paste form holds the bleaching agent long enough for it to work.) If the skin feels the least bit dry, smooth on a little cream or oil. This bleach may be used as often as desired.

When leg hairs become a problem and are really unattractive, it may be wise to use a depilatory. Before using such a hair remover, be sure to select the best available and always read directions carefully before using. **Warning . . .** Hair and nails are composed of the same substance and anything which will destroy the hair will also play havoc with the nails. Keep all depilatories off of your nails. If you do get some of the hair remover on your nails, quickly rinse it off with warm water.

Dressing For Comfort

To be well groomed one must be comfortably dressed. Shoes that are too tight, with heels that are too high, detract from the serenity of one's facial expression. Tightness around the waistline and shoulder straps that are too short, both add up to detract from one's ease and comfort that spell good grooming.

How does your appearance rate this summer? It's the little things that make all the difference between an attractive girl and one below average in looks.

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Ways with Cheese

We can do our part as consumers of a Canadian product by serving more tasty and nutritious cheese dishes

CANADIANS have never used cheese to the same extent as the peoples of Europe. In fact, the average Canadian consumes a mere three-and-one-half pounds a year. From a nutritional and an economic standpoint, this is not enough. With the excess butter supply which exists in Canada today, much of the milk which was used formerly for butter production will be diverted into the making of cheese. We can do our part as consumers of Canadian products by using more cheese in our daily menus.

Cheddar is the principal type of cheese made in Canada. It is commonly called Canadian cheese, or just cheese and is generally sold in bulk form. Process cheese, the usual type of packaged cheese, is made from a cheddar base that has been pasteurized and to which moisture has been added, generally in the form of milk. It has about two-thirds the food value of cheddar and is softer and milder.

Cheese contains, in a concentrated form, most of the food value of milk. It is rich in minerals and vitamins. It is a high energy food, as it has a good percentage of fat, and its protein content makes cheese dishes good alternates for meat. A one-inch cube of cheese is equal in food value to a glass of milk. Contrary to popular belief, cheese is not hard to digest, if it is remembered that prolonged cooking at high temperatures is to be avoided.

Cook cheese at a low temperature to prevent stringiness. With high temperatures and long cooking, the protein toughens and the fat drips out, leaving a tough, indigestible mass. When cooking cheese sauce, add the cheese last and cook only until melted. Any uncooked mixture of cheese, eggs and milk should be oven-poached in a moderate oven.

Cheese should be kept in a covered container or wrapped in heavy waxed paper. It may also be wrapped in a cloth wrung out of mild vinegar. Keep in a cool place, as a high temperature causes the fat to melt and escape from the cheese. With a large wedge of cheese, coat one side with wax, or press a piece of waxed paper on it with a warm iron. Then place the cheese on a plate or on waxed paper, with the cut side down. To help in speedier meal preparation, grated cheese can be prepared in advance and kept in a tightly covered container. One-half pound of cheese makes approximately two cups of grated cheese.

Almost everyone enjoys cheese, and it combines so well with such a variety of foods that there is no need for monotony in cheese dishes. You can use it in soups, as the main course for luncheon or dinner, in salads, in sandwiches, in desserts, or at the end of a dinner, with crackers.

Cheese Soup

- | | |
|---------------------|--------------------------------|
| 4 c. milk | 1 tsp. salt |
| 2 or 3 slices onion | $\frac{1}{8}$ tsp. pepper |
| 2 T. butter | 2 egg yolks |
| 2 T. flour | $\frac{3}{4}$ c. grated cheese |

Scald milk with onion. Remove onion. Melt butter in top of double boiler, blend in flour, add hot milk and seasonings,

stirring constantly until mixture thickens. Cook five minutes. Add a little of the hot mixture to the beaten egg yolks, then add to remaining hot mixture. Cook one minute and add grated cheese. Beat with rotary egg beater and serve at once. Yields six servings.

Salmon Cheese Loaf

- | | |
|-------------------------------|---------------------------|
| 1 tall can salmon | 1 T. grated onion |
| 1 egg | 1 T. melted butter |
| $\frac{1}{4}$ c. milk | $\frac{1}{2}$ tsp. salt |
| $\frac{1}{2}$ c. bread crumbs | $\frac{1}{8}$ tsp. pepper |
| 1 c. grated cheese | |

Turn salmon and liquid into a bowl and flake with a fork. Stir in slightly beaten egg. Add remaining ingredients and blend thoroughly. Turn into a buttered loaf pan or casserole. Bake in a moderate oven until firm. Serve with parsley sauce if desired.

Ribbon Sandwich Loaf

Remove crusts from day-old loaf of bread (two colors of bread make good color and flavor contrast). Cut four half-inch slices lengthwise from the loaf, spreading each slice with butter before cutting. Spread first slice with mayonnaise and cover with minced ham. Cover with second slice of buttered bread. Spread with grated cheddar cheese blended with salad dressing. Cover with third slice. Spread with mayonnaise and cover with egg slices and crisp lettuce leaves, then the fourth slice of buttered bread. Press layers firmly together. Spread outside of loaf with creamed cottage or cream cheese blended with cream or mayonnaise. Chill one hour before serving. Cut in crosswise slices.

Souffle Sandwiches

- | | |
|----------------------------|------------------------------|
| 2 T. fat | 2 eggs |
| 2 T. flour | 8 slices bread |
| $\frac{1}{2}$ tsp. salt | 4 large peeled |
| $\frac{1}{4}$ tsp. mustard | tomatoes or $\frac{3}{4}$ c. |
| $\frac{1}{2}$ c. milk | canned tomato |
| 1 c. grated cheese | pulp |

Melt fat, add flour, salt and mustard and blend well. Stir in milk and cheese and cook, stirring constantly until sauce is thickened and cheese is melted. Pour onto beaten egg yolk and fold in stiffly beaten egg whites. Toast the bread and spread lightly with softened butter. Cut peeled tomatoes crosswise in four slices. Place one slice and two half slices of tomato, or $\frac{1}{2}$ T. tomato pulp, on each slice of toast. Pile cheese mixture on top. Place on baking sheet and bake in hot oven until puffed and golden—about five minutes. Makes eight sandwiches.

Stuffed Celery Salad

Separate and clean stalks of celery. Fill stalks with whipped cheese. Put stalks together in original bunch. Wrap in waxed paper and chill until firm. Slice in half-inch slices. Serve three or four slices on lettuce leaves with additional salad dressing.

To make whipped cheese use $1\frac{1}{2}$ c. grated cheese and whip in sufficient salad dressing, mayonnaise or milk to make cheese light and fluffy. Season to taste.

Cheese Apple Pudding

- | | |
|---|-----------------------|
| $1\frac{1}{2}$ c. cake flour | 2 T. shortening |
| $\frac{1}{2}$ tsp. salt | $\frac{1}{3}$ c. milk |
| $\frac{3}{4}$ c. sugar | 1 egg |
| 2 tsp. baking powder | 2 c. thinly sliced |
| $\frac{1}{2}$ c. grated Canadian cheese | apples |
| | 1 T. cinnamon |

Sift together flour, salt, baking powder, six T. sugar, cut in shortening and cheese. Add milk and well-beaten egg. Pour batter into nine-inch pan. Arrange sliced apples over top of batter. Mix remaining sugar with cinnamon and sprinkle over apples. Dot with butter. Bake in moderate oven (350°F) 30 minutes. Serve hot with cream. Serves six to eight.

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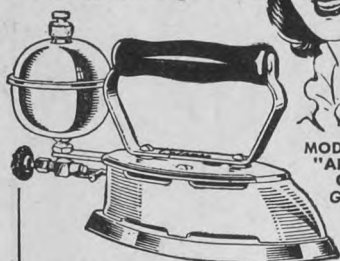


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Jelly-making Tips

THE three essentials for jam and jelly making are pectin, sugar and fruit acid. Properly balanced these ingredients turn fruit or fruit juice into jam or jelly. Jelly making can not be done "by instinct" for a jam or jelly recipe is really a scientific development.

* * *

Pectin is the jelling substance in fruit. By using commercial pectin for fruits that are difficult to make jelly and following tested recipes you can be sure of the right amount of pectin with the fruit.

* * *

Weeping jelly or the separation of a small amount of syrup from the jelly, is normal and will not harm jams and jellies unless yeast and mold start growing on the seepage. To prevent excessive weeping leave a half-inch space at the top when filling the glass.

* * *

A thin coat of paraffin should be poured over the jelly or jam immediately after it has been put in the glasses. One-eighth of an inch or one tablespoon of melted paraffin will give the desired thickness and prevent weeping. Cover tightly and store in a cool, dry place.

* * *

Doubling a recipe is not recommended. Follow the recipe exactly, measure with a standard measuring cup and time the boiling to the minute.

* * *

A full rolling boil is that high tumbling boil which cannot be stirred down.

* * *

Squeezing the jelly bag increases the quantity and flavor of the jelly. If it is not squeezed however, the jelly will be clearer.

* * *

Measure the fruits after they are crushed as larger-sized fruits take up more space than the small varieties.

* * *

Do not try to substitute bottled fruit pectin in a recipe that calls for powdered fruit pectin. Each recipe is individually tested and does not allow for substitution.

* * *

Jams and jellies will keep about a year generally. The flavor and color are retained for various lengths of time.

* * *

Toughness in jelly may be caused by using too little sugar or too concentrated a juice.

* * *

Sugar crystals may be due to too much sugar.

* * *

To make a perfect seal with paraffin once the jelly is cool, loosen the jelly about one-quarter inch from the top with a sharp knife that has been dipped in scorching-hot paraffin. When sealing, tip the glasses so that the paraffin flows into this space.

* * *

A good storage place for jellies and jams is on the top shelves of a closet where the air is dry and cool.

* * *

Wash berries a few at a time in a bowl of water, then lift them out into another bowl, using your fingers as a sieve to leave the sand behind.

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SUMPTUOUS SWEET-FILLED BRAID (Makes 2 large braids)

Scald
3/4 cup milk
1/4 cup granulated sugar
1 1/2 teaspoons salt
3 tablespoons shortening
Remove from heat and cool to lukewarm. In the meantime, measure into a large bowl
1/2 cup lukewarm water
1 teaspoon granulated sugar
and stir until sugar is dissolved. Sprinkle with contents of
1 envelope Fleischmann's Royal Fast Rising Dry Yeast
Let stand 10 minutes, THEN stir well; stir in cooled milk mixture and
1 well-beaten egg
Stir in
2 cups once-sifted bread flour
and beat until smooth; work in
2 1/4 cups (about) once-sifted bread flour
Turn out on lightly-floured board and knead dough lightly until smooth and elastic. Place in a greased bowl, brush top with melted butter or shortening. Cover and set dough in warm place, free from draught and let rise until doubled in bulk. While dough is rising, combine
1 slightly-beaten egg
2 tablespoons cream
3/4 teaspoon vanilla
1 1/4 cups brown sugar (lightly pressed down)
1/4 cup sifted dry bread crumbs
1 cup finely-chopped filberts
1/3 cup chopped candied peel
Punch down dough and divide into 2 equal portions; form into smooth balls. Roll each

piece into an oblong 10 inches long and 7 inches wide; loosen dough. Spread each oblong with

2 tablespoons soft butter or margarine

and spread with the filbert mixture. Beginning at a long edge, roll up each piece, jelly-roll fashion; seal edges and ends. Roll out into oblongs 12 inches long and 6 inches wide; loosen dough. Cut each oblong into 3 lengthwise strips to within an inch of one end. Braid strips, seal the ends and tuck them under braids. Place on greased cookie sheets. Grease tops. Cover and let rise until doubled in bulk. Bake in moderately hot oven, 375°, about 25 minutes. Cool. Fill crevices of braids with thick jam or butterscotch cream filling; frost with confectioners' icing and sprinkle with coarsely-chopped filberts.



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Jobs for June

Follow methods that save your purse

by MARGARET M. SPEECHLY

WHEN June comes around you probably feel that it is safe to put away for the season your sweaters, mitts and other heavy woollens. Inspect each article carefully, looking for dropped stitches, ripped seams and missing buttons. This means an outlay in time but if you regard it as a saving in actual cash, the effort will seem worth while, considering how costly woollen clothing has become.

Shake each piece to get rid of dust, turn pockets inside out and remove with a whisk the accumulated lint and other dirt. Brush the seams if necessary. Remove stains that might become permanently set in warm suds.

Lay each garment on a large piece of brown paper and trace the outline with a pencil. Then you will have no trouble in reshaping the wet article. If woollen garments are allowed to dry out of shape, they will not fit well and will wear out more rapidly because of the strain imposed upon the fabric. An outline enables you to turn out a professional job with straight edges, smooth neckline and sleeves and body in the right proportion.

Make up a rich suds with the best grade of flakes, or use a soapless detergent. The suds should be heavier than usual to cushion the wool and reduce friction. The rapidity with which soapless detergents remove soil makes them ideal for woollens, especially in hard water. Perhaps you have noticed that woollen garments washed for the first time, cause the suds to die down. Immediately add more dissolved soap to replace what has been lost.

Squeeze the suds through and through the fabric with your hands or rely on a plunger. Never rub, twist, wring or strain wet wool in any way. Do not lift a wet sweater up and down as you might a cotton garment. See that the water is lukewarm at all stages of the process.

A neat way to handle knitwear is to put it in a large colander and to press the material against the sides to remove the water. Then slide the colander into one rinse after another, instead of lifting out the article in the usual way. This prevents the tender yarns from becoming strained or stretched.

Large sweaters can be put through the wringer if it is loosely set. Without lifting out the garment fold it smoothly as it lies in the suds, then feed it into the rollers evenly, supporting the weight with your hands. If you are not satisfied with the cleansing job, put the articles into fresh suds. Rinse until no trace of soap is left.

Heavy socks and stockings need the same kind of treatment. You dry them on frames, of course. This is important because shrunken footwear is uncomfortable and holes soon appear. Not only does this add to your darning, but it hastens the day when you will have to invest in new socks.

From time to time, make sure that the frames for the children's stockings are large enough to keep pace

with their growth. Untold damage is done to toes by stockings that have become too small.

If you are doing woollen mitts or gloves, draw an outline of each on brown paper, while they are still dry. Follow the rules for washing woollen goods, and press out as much moisture as possible with clean bath towels or paper towelling. Lay each piece on its outline and gently reshape it. If there is color running from trimming or embroidery, put towelling inside without stretching the article out of shape. Paper towelling is handy for this and can be discarded. When mitts or gloves are heavily napped brush well with a whisk.

DRY all woollens in the shade or with the aid of an electric fan if they must be kept indoors. A window screen makes a good drier if covered with a thick towel and supported on two sides to allow good circulation of air. Lay the wet articles on the towel, so they will dry to the right measurements. Never place a wet wool garment on a coat hanger. Keep away from strong sunlight or the intense heat of a stove or register.

At this time of the year you may be considering washing feather pillows. Choose a warm, breezy day and prepare a rich suds with lukewarm water and a good brand of flakes or soapless detergent. The job is easier if the feathers can be removed from the tick to a thin cotton sack, but you can manage by sousing the whole pillow up and down in the suds. First treat spots or stains that might be set in washing.

The trick with pillows is to prevent the ticks from becoming soiled. Frequent changing of slips is the first step, especially if the boys use oily products for keeping unruly hair in place. A cotton case made to fit each pillow is a work-saver and you can use a zipper for a closure. You might even make a plastic cover for each pillow as an insurance against stains from medicines or the odd nose-bleed.

June is a good time to deal with mattress covers or pads. Mattresses represent an investment in money and as such deserve to be protected from wear and soil. A cover of unbleached cotton or sheeting that can be removed for washing periodically is well worth making. Or you may prefer the quilted cotton padding similar to silence cloth used for tables. This makes sleeping more comfortable and protects the mattress from stains.

To wash a mattress pad, shake well and soak in cool water for about 20 minutes to remove loose soil or stains. Wring evenly into a rich suds in the machine and wash for 10 minutes. Rinse until the water is clear, using a plunger to draw the water through the fabric.

A warm, breezy day is also needed for drying chenille or tufted bedspreads. Wash in a rich suds in the machine for 10 minutes. Loosen the rollers and put the spread through evenly. After thorough rinsing, hang it over two parallel lines to allow good circulation of air. As drying goes on, brush up the tufts with a whisk.

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IN our fairly modern kitchen there stands a good solid table and four ordinary looking kitchen chairs. To me there is nothing ordinary about them compared with today's standards, but they are a fixture; as much a part of our life as our marriage itself. They have a smug, satisfied, "You can't oust me" expression. They will outlast me—they have me beaten, and, believe it or not, they know it!

It's this way. They are a relic of the "good old days." Came from Ontario with my husband's family. To him they are a tradition—to me a headache! We inherited them at a time when I was intent on feathering a nest and entirely oblivious to what the future might hold. You have seen a hen fluffing out her feathers, kicking a few odds and ends together, scratching out some of the more uncomfortable odds and ends, then settling down contentedly with whatever is at hand? Well, I suppose I was like that. I certainly do not remember objecting to them particularly at that time. In fact I was more or less grateful for them, particularly as my husband, even then, displayed a marked affection for them. And that must be where I made my mistake.

You know what men are like. They will go to the same place to eat lunch for years if it is not too, too awful. They stay at the same hotel, wear the same old hat until someone jumps on it with both feet or a streetcar runs over it. They will stick to the same newspaper, pipe, neighborhood, and sit in the same chair until it falls apart under them, without even noticing the cover.

The Table and Chairs

Like the pioneers they can take anything—to my husband they are a tradition—to me a headache

by CHRISTINE A. McLEAN

There's nothing really wrong with that furniture. It is just a product of a bygone era, and my chief complaint is that it is too good. That table has the spirit of the pioneers, it takes everything. Bread kneading, wall-papering, water, heat, cold, humidity, dryness and anything else that comes along. It is permanent, stable, innately good and it knows it! It has quality, workmanship, and whatever it is made of or what holds it together so sturdily is beyond me, to understand. Is it the glue, nails, fit of the pieces? I'm sure I don't know. But it never becomes rickety, weak-kneed or worn-out. I have used it for some twenty years, moved it from one city to another, one kitchen to another. It has had its face lifted many times and been painted white, brown, grey, chinese red, dahlia red, Nile green, and cream according to the current surroundings and prevailing mood.

I have honestly tried to wear it out working at it, eating off it, bathing babies on it, abused it at canning time and tramped all over it during spring cleaning bouts. But it always comes up smiling. There is a drawer that holds the cutlery which is a particular pride and joy to my husband. It is so "handy." It bangs me in the stomach every time somebody wants an extra spoon, catches me a good one on the

hip when I jump up suddenly to get something. It gets full of crumbs and accumulates everything on earth besides the aforesaid cutlery. Everybody looks "in the table drawer" when something is missing, and the knives and forks look like a pile of straw with dribbles of honey, bits of string and old rubber bands interspersed. Once a week I patiently dump it all out, clean up the mess, and, with a feeling of accomplishment, start over again.

What will become of it eventually? Sometimes I wonder furtively if I should take the hatchet to it, knock out a few chunks here and there or spill lye on it. But latterly it has been gaily and lovingly dressed up by the man of the house with bright tile marbolem with chrome edges in an effort to satisfy my aesthetic longings for something more glamorous in kitchen beauty, and I cannot work up the necessary courage to deliberately destroy it and bring about a crisis in the family history. I did get rid of a couple of rockers by taking them out under the trees and conveniently forgetting all about them when it rained. But one can't go dragging the kitchen furniture outside every time it storms, though that is probably the most effective and painless method of destruction I can devise. No, that would be too obvious!

I shall never have the courage to dispose of that table and it sits there quite snugly, surrounded by four old chairs, chipped, battle-scarred, unbowed. But Oh! for a gleaming chrome, bright-colored top.

The other night, with the spring urge to clean up bounding temporarily around under his vest, my husband looked critically at the furniture. Hope, which is said to spring eternal in the human breast, caused my heart to flutter and skip a beat or two before it resumed its normal tempo.

"Guess it's time we sanded off the chairs and gave them a coat of paint again," he said happily.

You see what I mean?

Helpful Hints

When you clean house roll the large rugs diagonally because most of the weight is in the center. The rugs will not buckle or tend to break threads and they will be easier to carry.—L. P. Bell.

* * *

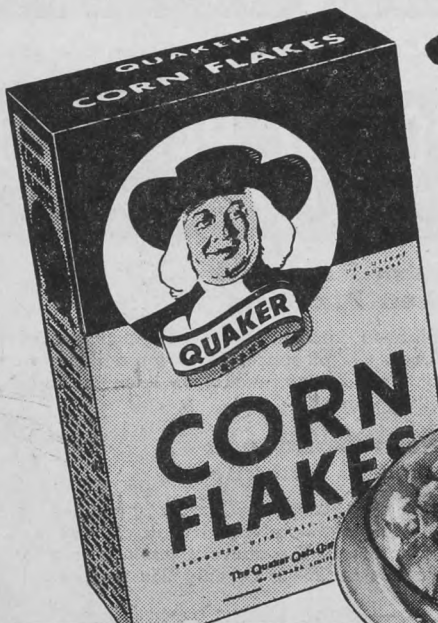
If a screw persists in working loose, remove it and dip it in glue or household cement and replace it immediately. The binding substance will dry in the hole and the screw will not come loose again.—L. P. Bell.

* * *

The large tins which tractor grease comes in are handy containers for a number of things. I take the grease off easily after they have been emptied by taking a handful of sawdust and rubbing the inside of the can with it. In no time at all the grease is off.—Mrs. R. J., Man.

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689

No. 689—A side-buttoned sun dress and neat little bolero make up this summer ensemble. Sizes 12, 14, 16, 18 and 20 years; 34, 36, 38 and 40-inch bust. Size 16 dress requires 2½ yards 35-inch fabric; ¾ yard contrast. Price 35 cents.

No. 692—Make this junior date-time dress in a dark sheer with a matching lace yoke. It has a hip-swathing peplum that ends in a floating panel at the back. Sizes 11, 13, 15, 17 and 19 years; 33, 35 and 37-inch bust. Size 13 requires 3½ yards 39-inch fabric; ¾ yard 35-inch lace; 1½ yards ruffling. Price 35 cents.

No. 688—Bolero ensemble, for town or country wear, consists of a blouse, skirt and bolero with a cummerbund to accent your waist. Sizes 10, 12, 14, 16, 18 and 20 years; 34, 36 and 38-inch bust. Size 16 (34) requires 4¼ yards 39-inch fabric; 2¼ yards contrast. Price 35 cents.

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692

688

No. 705—Little girls' whirl-skirted sun dress is topped by its own bolero and has yoke-front panties to match. Sizes 2, 4, 6 and 8 years. Size 4 requires 2½ yards 35-inch fabric; ¾ yard contrast. Price 25 cents.

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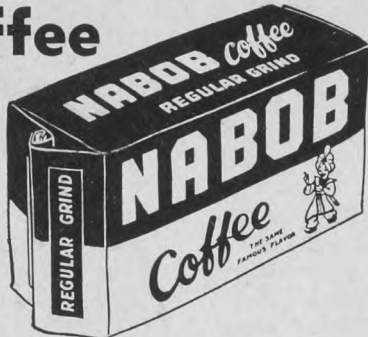
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The Trail Ahead

Continued from page 11

the board walk that ran in uneven waves on either side of the four business blocks—but the life that he remembered was gone. Unfamiliar faces peered at him; unfamiliar horses were tied at the hitch-racks of the saloons.

He turned his head to Tom Lee. "I don't know this town."

"No," Lee answered. "In more ways than one."

THEY had walked two blocks and the grey double-decked hotel was in the next one ahead when four riders came pounding into the street from the north. Lew halted, saying, "Wait."

The four swept past in a reckless pace, curved in toward a saloon behind him and flung themselves from the saddles. They made quick work of tying up at the rack. Then they stormed inside.

Lew brought his bag down from his shoulder and leaned it against a store wall. "Tom," he said, "go on to the hotel. I'll be there in a minute."

A sudden warning came into the old man's voice, "You keep out of trouble here! There's nothing you can do."

"Maybe there is," Lew answered. He was already walking away. "Go on," he repeated. "Don't stop."

He moved back along the lighted saloon front, glanced inside and saw the four men close together at the bar. They had entered Clear Fork from the north; but they could easily have circled in from eastward. Any good horse could outrun that train for a short distance. Past the doorway light, he halted, looked once up and down the street, then stepped out to the edge of the sidewalk.

The second horse tied at the rack was a dun with a Pitchfork brand. All four were blowing; they had been ridden hard. Two were tied with hair ropes, two with braided leather. The dun, he saw, had one of these. The light was dim and he wanted a closer look at the rope end. He reached out his hand and bent down. It was freshly cut. He was aware of two other things, simultaneously, that same instant.

Across the street a man shouted, "Doyle!" A girl came down the steps of Jackson's Mercantile Emporium, her arms piled with bundles.

He stepped back from the tie rack, failed to locate the man who had shouted, but saw one at the bar turn and come bursting out through the low swinging doors. They almost collided. The man drew back, made a sudden grab downward.

Lew Rand's right fist rose in the same second, empty, but doubled into an iron knot. He caught the sharp edge of jawbone with all his weight flung behind the blow. The man's head snapped back and he half turned around before he dropped.

"Two-Stripe," Lew said, "that was a bad move." His gun was out now, covering him. He knew this man, "Two-Stripe" Doyle, meaning skunk.

The other three had come to the doors, puzzled, wary. Doyle was picking himself up.

"Keep your hands clear," Lew warned him. Then to the three, "Just an accident, gentlemen. No harm done."

Two-Stripe Doyle stood up and his sharp, black-eyed face was contorted by an old, unforgotten hatred. "So you're back!" His lip curled. "All right, Rand, I'll see you again!"

"Yes," Lew said, "I think you will."

All four moved back into the saloon; yet he stood waiting, knowing that this thing had been watched, and that he was being watched even now.

"Lew—!"

He turned slowly.

"Lew Rand!"

Connie Lee came toward him from the steps of Jackson's store.

She said again, "Lew," as if by that repetition of his name she was trying to establish a thing she hardly believed. But then the moment's wonder went out of her voice, and it was brittle. "Making trouble, Lew, as always."

He smiled at her. "Hello, Connie." Yet he was thinking how different this meeting was, from the one he had dreamed of. And she had changed. His mind had pictured her always as she had been two years ago; she was eighteen then, a small, slim girl with curly brown hair on a restless little head, dark eyes, and a quick, wilful spirit that she got from Tom Lee.

She was still a small girl, straight as a Navajo, but the rangy young body had filled out, soft and sweet. Even the boy's work garb that she wore now, copper-riveted blue jeans and a brown calfskin jacket, made her no less feminine, fully matured.

Lew shook his head and his smile faded. "It was no trouble I started, Connie. But there's no use explaining, is there? It makes no difference to you now."

"No."

"That's what I understand."

Their words didn't matter; they could have been saying anything, for he knew they were both bridging a difficult moment, hiding whatever they might feel. He saw her dark eyes sweep up and down the length of him, making their appraisal. She turned her head then with a quick little movement, gazing obliquely past him, with her face set, her lips tightly compressed; and in that brief profile he saw a thing which had not been apparent at first. The Lee spirit was still there, proud and strong, yet tightened with a look too close to bitterness for a face so young. The pinched hard times of these past two years could not do that. A sudden dull anger, violent with the need of some outlet, ran through him. This girl was marrying Clay Carr tomorrow. She was not happy tonight!

He reached for the bundles in her arms, saying, "I'm headed for the hotel, Connie. Let me carry these."

Her eyes leaped back to his face, startled. "No! No, Lew..." It took her an instant to think of her reason. "I forgot something in the store." She took a step away, paused, came back and stood up close in front of him. "Lew, why did you do this? Why did you come here now, at this particular time... was that the reason?"

"No," he said. "I only heard about you and Clay tonight."

"Lew, I'm sorry." She moved her head, slowly, and a ray of light from a window showed him a genuine hurt deep in her eyes. "Two years was too long a time. I didn't think you were coming. And now... We're starting north tomorrow, Clay and I. Don't try

to see me again. You can understand that. Please."

IF he had seen a happiness that I should have been there on the eve of a girl's marriage, he would have turned his back on Clear Fork, and her, without stop. But not now. "No," he said strongly. "No promises."

She stared up at him over the tops of her bundles. Her lips parted. A sudden flush colored her cheeks. She turned quickly and ran up the steps of Jackson's store.

Tom Lee was waiting in the hotel lobby, his huge shaggy form pacing restlessly in front of the dust-filmed window. Lew entered, his bag again balanced on his left shoulder, and took one glance around the familiar box-shaped room. A lifeless barrel stove was in the center, its pipe running straight to the ceiling. Chairs with whittled arms were ranged along three sides, all empty. Once, he remembered, you paid five dollars here to sleep in a bed for eight hours—beds that were never unoccupied night or day.

Now the lobby was deserted save for himself, Tom Lee, and fat Sam Honeyman, the proprietor, asleep in a rocking chair beside the cold stove.

Tom Lee asked, "What was it?" and started along a dark hall.

Pacing beside him, Lew said,

"Nothing. Just got myself some information. Two-Stripe Doyle, I see, is still with the Pitchfork."

The grey head turned. "Haven't changed much, have you, boy?"

"No," Lew answered; and repeated, slowly, "No, Tom, I guess not."

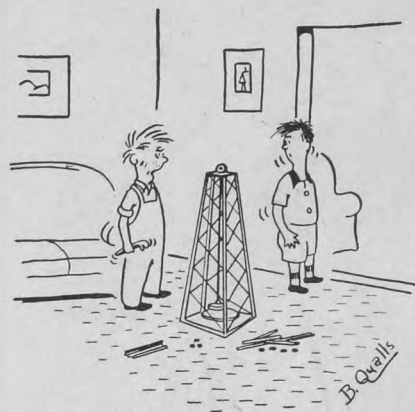
AN oil lamp flared up as Lee opened the door of a small room. He tossed his hat onto the bed and sat down heavily, waving toward a chair. But Lew Rand only pulled off his coat and hung it carefully on the chair back. The vision of unhappiness on Connie's face still goaded him with a rage that more and more needed some release. When he had rolled tobacco in brown paper, and bent over the lamp chimney for a light, the flat muscles of his cheeks showed their angry tension, and turning suddenly, he said, "I've never felt so murderous in my life! What's wrong here? What's the trouble on the Circle Dot . . . and what in hell's the matter with Clay Carr?"

"One at a time," Tom Lee said. "I'll answer the last one first. There's nothing the matter with Clay Carr. Plays poker too much, maybe, and drinks some. You're like that yourself."

"Except," Lew put in, "I know there's a limit to both."

"All right," Lee agreed. "Anyway,

Clay Carr is my foreman, he's marrying my daughter—that shows where he stands with me. The trouble here all centers around Gil St. Clair and his Pitchfork outfit. You'd think a man would let an old grudge die down. Twenty years is too long a time for neighbors to be fighting. Before I'll see the Clear Fork range made into a



"It's just our luck, it will be castor-oil!"

battle ground again, I'll turn tail and run. I will. It was my dream to leave Connie a big ranch, secure, with a good man to live on it with her. But that can't be." He waved toward the open window. "This country's burned up. Let Gil St. Clair have it. I'll start a new place in the north."

"If you get there."

The grey eyes came up for one quick look and lowered. "Yes . . . if I get there."

Lew Rand stared down at the shaggy head and it came to him with a growing turbulence that something had taken the life out of Tom Lee. He couldn't see the man like that. Almost angrily, he said, "This isn't like you, Tom. If there's to be trouble with St. Clair sooner or later, let's get it over with. Count me in."

"No," Lee said.

"Why? What's holding you back?"

"Time. My Indian contract calls for delivery in Dakota on July First. A single day later and I lose. Too many others want to sell beef—St. Clair for one. The stagnant cattle market has put him against the wall as much as it has me. He's got a Pitchfork herd gathered to match mine and I can't lose any time fighting him down here. If I get on the trail ahead of him tomorrow, I'll stay ahead. That's my best bet."

"Well?" Lew asked. "What's the rest?"

Tom Lee stood up. "No use. I've fought every kind of trouble to make this start. When we rounded up I found my own herd short, surprisingly short, and I had to buy in stuff. It isn't paid for, and I can't leave until it is.



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I owe debts here in town. I'll need money for the trail. Tonight, I haven't got one round dollar."

"So that's what was taken from the train?"

Lee nodded. "Ten thousand dollars. You remember I've always held onto some land scrip that I bought cheap. I had ten thousand acres worth a dollar an acre now. I sold it, and that money was coming in from Fort Worth on the train tonight."

Across Lew Rand's brown face there came a faint smile, reflecting an ironic amusement at the way he saw fate turning. "Would seven thousand dollars," he asked, "do you any good?"

"Do any good!" Tom Lee repeated. "It would be enough. But where—"

"Here." Lew opened the grey shirt front at his waist, unbuckled the thick deerskin belt underneath. He laid it across Tom Lee's arm. "It's clean money," he said, "honestly earned. I speculated in cattle up north."

The old man shook his head. "Then I can't let you gamble this with me."

But I've got to accept. I'll make out papers for this."

But Lew swept that aside, impatient. "Your word is good. Another thing; nobody needs to be told. You've hired me as a trail hand, that's all. I want no favors."

LEE opened a section of the belt. "Then I'll take three thousand now and square my debts in town. You'll keep the rest on you."

He stuffed three bundles of paper into his coat pocket, and Lew was fastening the belt again beneath his shirt, when a quick rap struck the door.

Tom Lee called, "All right," and the door opened. Connie burst in, breathless. "Dad, I've just heard! It's all over town but I just now heard about it. The robbery, I mean. What are you going to do?"

"There now," he soothed her. "Wait a minute. What have you heard?"

"Why, that the registered mail was robbed and your money taken."



"Can't we just forget the waiting period? He may not last three days!"

"Take it!" There was a rising note of recklessness in Lew Rand's voice. "For two years I've stayed away from certain things. I'm in no mood to stay away from those things tonight." He grinned suddenly. "Take it, Tom, and save my weak soul!"

"No," Lee said slowly. "I'll make you a bargain. Half interest in the herd for this seven thousand dollars."

"Fair enough," Lew agreed, "and I'll make you one. What men have you got?"

"Most of the old hands—Joe Wheat, Bob Slade, John Quarternight. Snow-foot Ryan is my horse wrangler. Barney McCann will cook." Tom Lee paused.

"You're still one short," Lew prompted, "even counting yourself and Clay. You'll need six for the herd work."

"Yes. Clay was getting another."

"Tell him never mind."

Tom Lee smiled, but said gravely, "No, boy. That would never do. You and Clay and Connie . . . no."

"That's my bargain."

It was a long moment before the old man answered, "And a bad one."

"Does the town know how much?" "Yes, ten thousand dollars."

Lee turned and gave Lew Rand a look. "There's the way it is here. Nobody knew I was selling that land scrip. I had kept it secret. But somebody did know. They knew I was waiting for it on the last train this week, and how much. Now the whole town has the facts within half an hour after the robbery."

"Maybe," Lew answered, "your secret found a loophole . . . close to home."

A quick fire burned in Connie Lee's cheeks. "What are you saying! I knew it, yes, and Clay knew it. If that's what you mean, it's ridiculous, it's unfair, and it's not for you to say!"

He smiled at her. "I said it, though."

"Here!" Tom Lee broke in. "Stop that. Lew, I think Connie ought to be told. It need go no farther, not even to Clay, but she ought to know."

"Tell her, then," Lew agreed, and watched the changing expression on Connie's face as Tom Lee said, "Lew has just bought a half interest in the Circle Dot herd. He's going with us up the trail."

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A SUDDEN frightened look filled the girl's dark eyes; she stood taut, staring. In a breath, she repeated, "Going with us . . ." And then, slowly, behind that fright there grew another thing, hardly readable, hidden so deep that Lew Rand could not be sure. It seemed to him that her face betrayed a fleeting moment of relief.

Before she could speak again the room's door jarred with a knock, this one heavy beneath a pounding fist.

Tom Lee opened it. Red-faced John Quarternight clumped in. His puckered blue eyes fell upon Lew Rand and he grabbed both of Lew's arms at the elbow and shook him. "Heard you got back! Couldn't find you on the street. How are you? Where the hell—Connie, don't you listen." He stood there grinning, a tall slat of a man, hard and tough and lovable; and Lew grinned back, grateful that John Quarternight was still with the Circle Dot.

Quarternight dropped his hands and faced Tom Lee. "Clay showed up?"

"No," Lee said. "I'm waiting for him."

"Better not," Quarternight advised. "Clay rode out of town half an hour ago. He said for us to start on out to the ranch if he didn't get back."



"Your wife called and said you would probably be in, but to tell you to come on home—she's having steak for dinner!"

"But John!" Connie broke in. "Clay was to meet me here. We had some things to get. Where did he go?"

"Didn't say."

Quarternight's puckered gaze, Lew noticed, did not meet the girl's suddenly troubled eyes. He spoke to Tom Lee, "That ain't all. A St. Clair man came bursting into town about five minutes ago from the west. The whole bunch of Pitchfork men that's been hangin' around the Outpost Saloon all day took off with him, headin' back. I don't know . . . I think we better travel."

It was a deliberate speech, the information drawled out in an unruffled tone; but to Lew Rand its hidden meaning was clear.

Connie started immediately for the door.

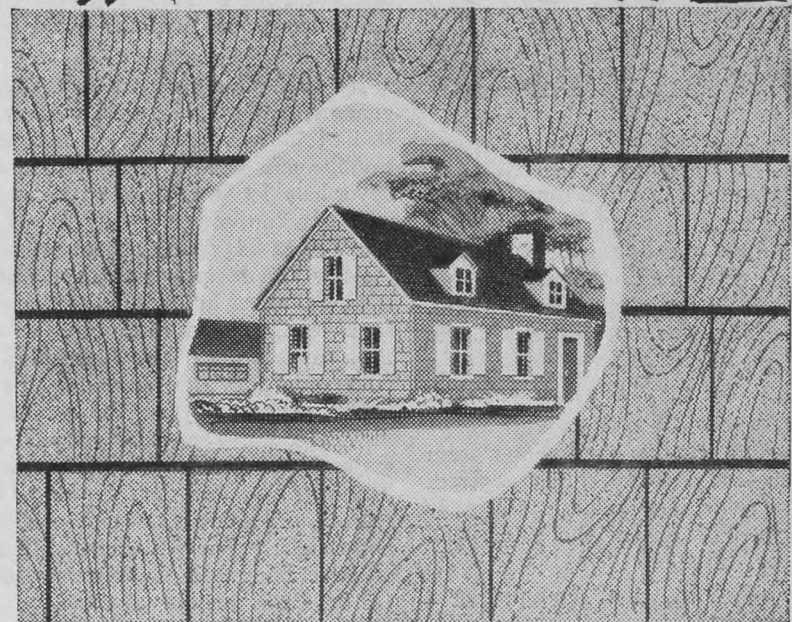
Tom Lee said, "Go with her, John." And then, "Lew, we haven't got an extra horse in town. But the supply wagon's down at the livery. You can drive that. I'll take a few minutes to settle my affairs, then we'll catch up with you."

They moved together across the hotel lobby, where fat Sam Honeyman was still asleep in his rocker beside the cold stove. Then out in the street Lew Rand walked alone, and the sudden emptiness here was a familiar story to him. This was the beginning

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—a relayed message, the out-rush of men who had waited in town all day. The end? He shook his head gravely. The end, also, was as familiar as the beginning, as sure as tomorrow's dawn. He had seen it so often, always the same . . . someone must lose.



"Who?"

At the livery barn he found a light spring wagon and packed his bag in with the ranch boxes. To the attendant with black cropped hair and surly eyes, a stranger to him, he said, "I'm taking this out for the Circle Dot."

"There's a bill," the man growled. "Four bucks."

Lew brought his hands down from the seat and faced him, angered, feeling something behind that surly demand "Tom Lee," he said, "will pay your bill."

"Yeah? With what? You pay or I keep the rig."

"Try it!"

Left-handed, Lew reached up again to the seat back. His right arm hung free. He stepped up onto the wheel

hub and then to the floor boards. Seated, he backed the team of sorrel ponies out of the barn and into the street. He kept a level gaze on the man. There was no further talk of money.

It was a small event, and yet it set his angered mood and turned his thoughts into violent channels. That was the way things had gone here, like coyotes snapping at a wounded bull who was down. Demanding payment of four dollars from Tom Lee, because, suddenly, the town knew he was broke! There was hardly a man in Clear Fork who hadn't owed Tom Lee money, and perhaps owed him still.

He had often thought that Tom's generosity was his greatest weakness. It had in fact brought on his long trouble with Gil St. Clair; he should never have let St. Clair take root as his neighbor. In those early days Tom Lee was lord of this country; his word was the law and his power reached out a hundred miles in every direction—as far as his Circle Dot cattle could roam. By a single order to the 30 or 40 men who rode for him, he could have kept squatters beyond the limits of his range. But Tom Lee's vision, Lew realized, was always ahead of his time. This was free land then, bound to be settled, and so, where other cowmen had fought a deadly war in their parts of Texas he had let his squatters stay. Gil St. Clair was one of these.

No man can live at peace with his neighbor, who is not at peace with himself; and in the truth of this, Lew Rand recognized what was behind St. Clair's undying grudge against Tom

Lee. For the rancor that goaded St. Clair so unmercifully was not the dispute over water in West Branch Creek—though this was the given cause—it was an earlier, and far more galling defeat.

In his own bitterness with knowing that Connie Lee would marry Clay Carr tomorrow, Lew understood St. Clair's feeling well. The man had failed to win the girl he wanted. He had never married any other, and had set himself to become more powerful than Tom Lee who had taken her. It was proving himself the better man after all. Even when the woman had died, his cutthroat struggle for supremacy had gone on. Scowling, Lew considered Gil St. Clair, and saw the parallel with himself. For he knew deep down, that he was going up the trail not so much because he was needed, but with a hope that events of the long drive might prove something to Connie Lee.

The sorrel ponies had carried him at a fast trot, following the ribbon of wagon road west across the dark prairie. He had been aware of the land's changing surface. Now the road was lifting him gently upward, sloping into low hills, grey-spotted with smoke tree brakes and the darker tufts of scrub oak.

Before entering the hill folds he pulled in and turned on the seat for a look back. Lights of Clear Fork were lost beyond a velvet darkness. He listened; hoofbeats of running horses would carry far in this absolute silence. No sound broke it, and an uneasiness ran through him. For this

was halfway to the Circle Dot. He had expected Tom Lee and the others to catch up with him before now.

He thought, "took more time in town, maybe," and held the sorrel team at a walk when he started on.



"This job's okay, but it keeps me cooped up. I'd rather sooner be out on the road again shearing sheep."

A mile back inside the hills, the road dipped to cross West Branch Creek. Wheels of the wagon grated on a dry gravel bottom, and he saw by the deep ruts that no water had flowed down here this spring. Even in the night it was plain to him that this range was burned up, as Tom Lee had said. On the far bank, where the road continued west along a shelf, the buffalo grass was eaten down to the hard hummocks of its roots; rings of white bones in the creek bottom outlined parched waterholes where thirst-mad cattle had died. He took a loyal satisfaction in knowing it was this, and not Gil St. Clair, that had whipped Tom Lee.

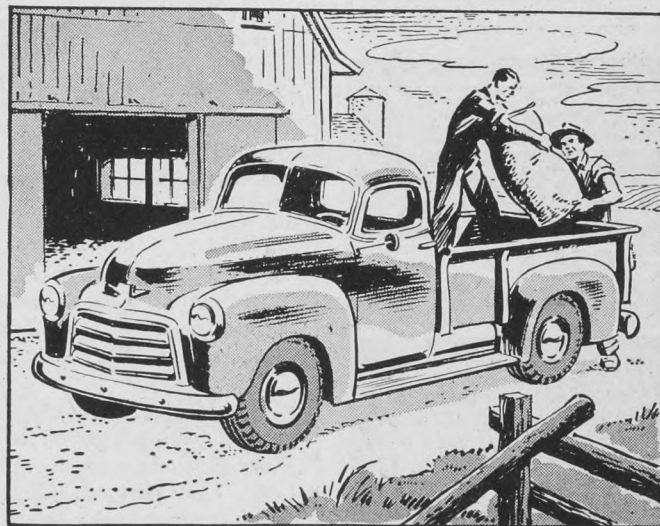
His uneasiness, and a keyed wariness for any sound behind him, had not relaxed. His first warning was a

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faint, metallic clatter that he located back where the road crossed the creek. He pulled out of the ruts and stopped his team, and was down beside the wagon, sheltered by it, when the drumming of hoofs rushed toward him through the dark. He drew his gun, taking no chances; then recognized Tom Lee's grey in the front with Quarternight and Connie trailing him closely.

They drew abreast of the wagon and halted. "Trouble?" Tom Lee asked.

"None here." Lew stepped up to the seat.

"We'll push on, then," Tom Lee said.

But their saddle horses were winded from a hard run, and the sorrel team easily kept up with their jogging pace. For a time the riders continued single file, then Quarternight edged up beside Tom Lee, talking, and Connie was alone behind them. Lew watched her slim back. She rode like a soldier, straight, firmly seated, but with an easy sway to every move that her chestnut pony made. He had never seen anyone, woman or man, who could mount a horse so well.

She had given him one look in passing and turned her face away. Now, as Quarternight and Tom Lee kept on close together, she dropped back a little. Then with a quick move, as with some abrupt decision, she pulled out to the left of the road, stepped from her saddle and tied her reins at the horn.

Lew halted his team. Without a word she climbed up on the seat beside him. He started on and her chestnut pony trotted in behind, nosing a sack of grain at the wagon's tailgate.

He watched the profile of her face, waiting. Her dark eyes were darker still beneath the wide hat brim, telling him nothing; but he saw the curved line of her lips and it was soft; her small round chin seemed on the verge of trembling.

He spoke to her gently. "Connie. You have nothing against me. Nothing at all."

SHE faced him then with a quick lift of her head, a gesture of challenge, but there was little of that in her voice. "Lew, why did you come back? Why?"

"I said I would, Connie, in two years. That was two years ago this April, almost to the day."

"Yes! And in two years I've had three letters from you—the weather, the buildings of Kansas City, the mountains of Montana . . . not one word. . . ." She broke off, stared at him, asking then more quietly, "Lew, what did you think?"

What had he thought? He looked away from her into the sweep of low, dark hills. There had been no thoughts strung together in words; that was why he had not been able to put anything down on paper. It had all been in pictures. Against everything that he had looked at he had seen this girl moving, smiling; when he had written how beautiful the mountains of Montana were, it was because he had seen her there with him some day; he had walked the streets of Kansas City, lonely, wanting to share it with her. Even the weather was a thing to write about, because, good or bad, she rode with him. But tell her all this . . . put it down in his cramped handwriting on a dirty piece of paper?

A deep embarrassment locked such words inside of him even now.

He felt a moment's helplessness, and to cover it, he said stubbornly, "I promised to come back. I thought you would wait."

"Yes, you promised to come back—and that was all. Lew, I was only eighteen that night, a sentimental girl. You made one promise, but that wasn't enough. I needed something more. Week after week I rode into town, mad for your letters. When they did come there was nothing in them to make me sure. You don't understand. A girl must hear a man's words, over and over. We never feel secure, I suppose. We've got to be told."

They looped up through a hill pass and curved down on the other side. "And you feel secure now, Connie?" Lew asked.

She hesitated, too long, he thought, before she answered, "Yes. Clay is dependable. Slow, you'd say, but dependable."

He nodded. "I remember now, it was the turtle that won the race."

"Clay," she said, "is no turtle, either!"

"No, I guess not, Connie. A turtle knows when to pull his head in."

She pressed her palms on the seat, lifting herself up. "I don't have to listen to that sort of talk!"

"I'm sorry, Connie." He took her arm and pulled her down again. "I mean nothing against Clay Carr. It's only that women know men in one light, men know men in another. This talk is general, if the man you are going to marry falls inside it, that is just accident. But every man should know when to change his game. I've watched Clay play poker; his eye is too much on the pot and not enough on the cards the other fellow is drawing. Give him a busted straight and he'll put up everything he's got, hoping to fill it. No, that isn't poker . . . or life, either. You can't plod through on a single track."

"What are you talking about?"

"Tomorrow," Lew said. "And the long trail north. Clay will be foreman, and the cards are against him, even stacked against him, I think. I hope he knows how to play the hand."

"If not, you'll play it for him? Lew, that's what I'm afraid of. You haven't changed one bit. So sure that your ways are right. It was a fine thing you did, pulling Dad out of a hole with your money. But you'll only put us in another one by going up the trail."

They were facing each other, bodies turned, knees touching. He held her eyes in a long gaze before he spoke. "Are you honest, Connie, deep-down honest? Tomorrow you will be Clay Carr's wife. Do you think that's going to be an easy thing for me to take? God knows it isn't. And yet I want to go up the trail with you. I know too much of what is bound to happen before you ever see Dakota. But the word is yours." He paused, giving her time before he asked, "Deep down, do you want me to turn back tonight?"

Her lips parted, and he saw the sudden moist brightness of her eyes. She turned her face from him, but then one hand groped and found his forearm and lay there with fingers curved around the hard bulge beneath his sleeve.

She shook her head, slowly, and her lips shaped an answer that he hardly heard. "No . . . I don't."

To BE CONTINUED.

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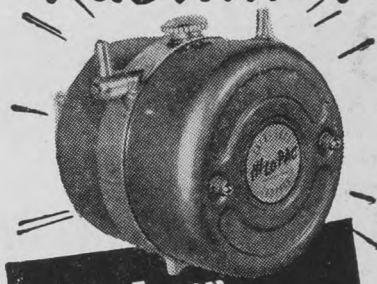
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Earth Currents and Poultry

*British Columbia poultryman believes a peculiar
natural phenomenon affects the health of his birds*

POULTRYMEN who operate on a strictly commercial basis have many problems to contend with. They must, if they are to achieve maximum profits, watch carefully every detail of management and guard against the many causes of illness or slack production.

One of the most unusual set-ups The Country Guide has ever met with was found last summer on the poultry farm of C. Twiss, not far out of Cloverdale in the Fraser Valley, B.C. Mr. Twiss, I understand, was formerly a civil engineer who came to the Cloverdale district quite a few years ago with his financial resources at a pretty low ebb, and finally began his attempt to establish himself in the commercial poultry business, which is so prominent a factor in the agriculture of the Fraser River Valley.

At the time of my visit Mr. Twiss was turning out approximately 100,000 birds per year. His business was poultry rather than egg production. Until about three years ago he marketed nothing but broilers. When the market became keenly competitive, however, he switched to a combination of broilers, fryers and roasters. Broilers still made up about 50 per cent of his output.

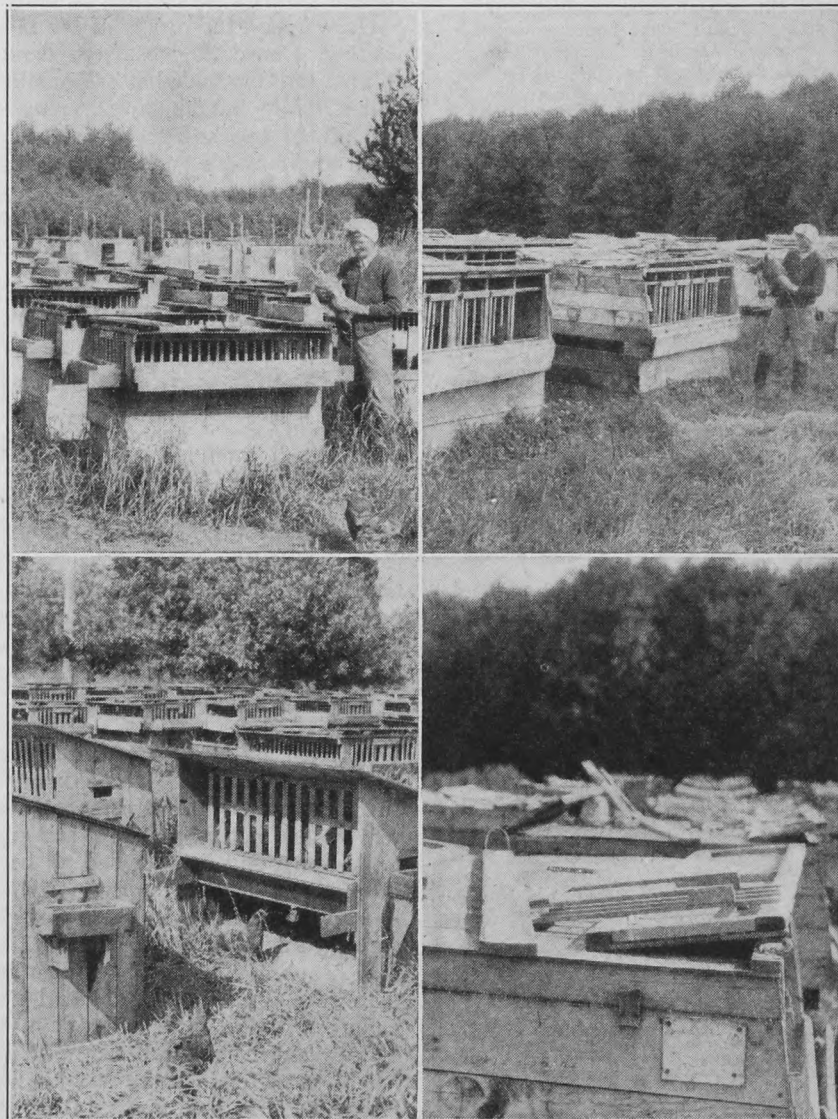
Day-old chicks are shipped in every day. Broilers are marketed at from two pounds to two pounds, two ounces; fryers at from 2½ to 3¼ pounds; small roasters at 3½ to four pounds; and roasters at four pounds

to six pounds. Eight different types of housing are used to carry birds from the day-old stage to marketing as mature roasters. The day-old chicks are kept for two weeks in a special type of outdoor pen arranged so that the birds are housed in trays, or in a brooder house. After this, they go to a special 3' x 8' pen where they remain until they weigh about 1½ pounds. From here they go to a special coop, housing 15 birds. These coops are 11 inches high. They are moved every two months and cleaned.

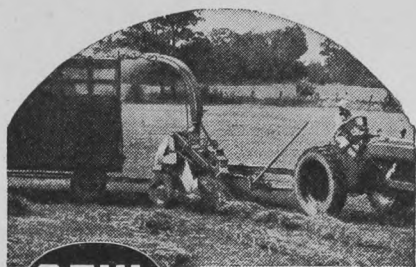
Birds which are not sold as broilers are then moved, as they grow in size, to larger pens, until they finally reach the fattening pens, which only hold two birds. Mr. Twiss uses pens which he has designed himself for all stages of growth. No time or money is wasted on spit-and-polish at the Twiss establishment. Everything is strictly utilitarian.

More recently Mr. Twiss had erected a brooder house for the young chicks. Half of it is also used for broilers and will hold 2,800. Incidentally, cornmeal is the principal ingredient of the feed used by Mr. Twiss throughout the life of the bird, from beginning to marketing.

By far the most interesting, and certainly the most unusual feature of the Twiss plant, was the attention paid to what Mr. Twiss called "earth currents." I am neither physicist, geologist, nor engineer, but I did know that in certain places, magnetic cur-



Top two pictures and left, below, show outdoor coops of three sizes used for rearing market poultry by C. Twiss, Cloverdale, B.C. Lower right shows board with curved wire used to detect "earth currents," by holding over it a two-foot wire, which is agitated in presence of current.



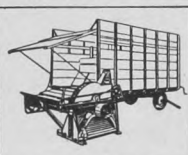
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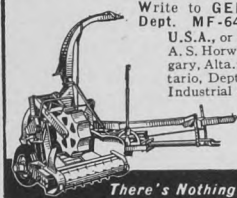
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rents, which seem to emanate from the earth's surface, have been noted. Consequently when Mr. Twiss, whom I found in the house reading the paper and hunched up in a corner of the room, told me that this was one corner of the room where there were no earth currents, I was interested rather than incredulous.

After the first mention of earth currents I waited for some explanation to be unfolded. It soon appeared that these earth currents, whatever they may be, had become almost a dominant factor in the conduct of the business. Mr. Twiss is located on a plateau above Cloverdale; and on the far side of his holding is a higher land level, which presents a more or less rocky face to his layout. When I inquired whether these earth currents were due to this rocky location, Mr. Twiss said he did not know. He had no explanation, except that the currents did exist and did affect the health of the birds. Furthermore, these currents were not always to be found in the same place, and frequently it was necessary to move the coops, perhaps only a few feet, to escape the current.

HE had suffered a substantial loss in 1948 as a result of kidney disease and fowl cholera and it was following this costly outbreak, as I recall it, that he and his forelady, Mrs. Stevens, discovered the existence of these currents. Today, what I can perhaps call an "earth-current detector" is a piece of equipment without which neither Mr. Twiss nor Mrs. Stevens ever move around the plant.

Its use reminds one of witching for water, except that in this case the witching wand consists of a piece of wire about two feet long, which, held by one hand horizontally in the presence of an earth current, begins to revolve up and down with a circular movement. Where it does not contact an earth current, the wire will remain extended as steadily as one may expect the human hand to hold it. Mrs. Stevens demonstrated its working to me on several occasions as we proceeded along the rows of coops and cages. I tried my own luck with it, but was no more successful than I have ever been with a witching wand. In a place where, for Mrs. Stevens, the wand would move more or less vigorously, it was for me entirely lifeless, but if she put her hand on my wrist it began to move.

To make detection easier, Mr. Twiss has devised a gadget to lie across the top of each coop. It was simply a five or six-inch board as long as the coop, to which was nailed a strand of wire the full length of the board, near the edge, and returning down the other edge of the board after having made about a four-inch bend, which bent upward at about a 45-degree angle at the end which was at the center of the length of wire. When the piece of wire in the hands of Mrs. Stevens was held over this device, it was said to operate unfailingly, if not interfered with by any metal. We tried one coop where this did not seem to work, but immediately found a small frame lying part-way over the device, which was nailed together, and when this was removed the detector began to work. The metal nails had interfered.

Both Mr. Twiss and Mrs. Stevens informed me that the earth currents make the birds restless. Their eyes

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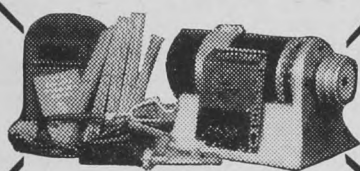
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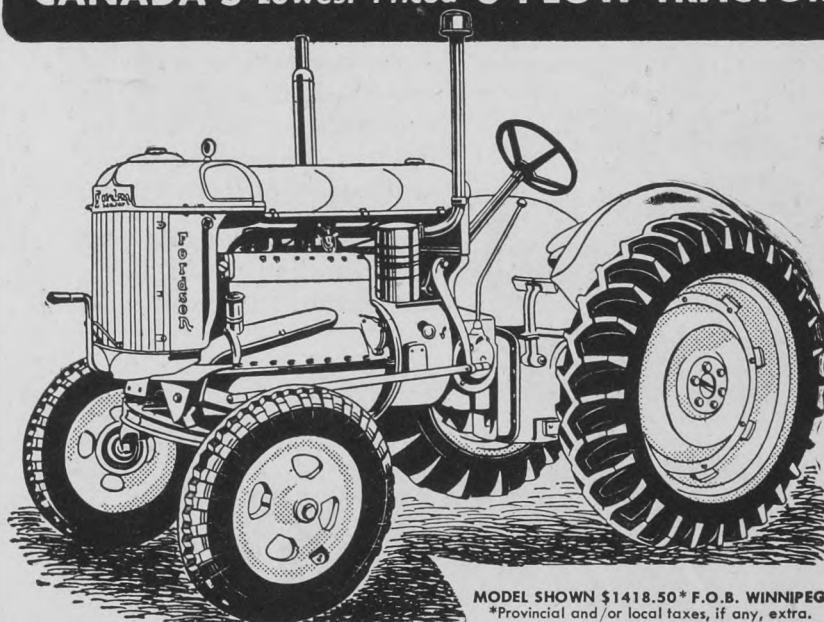
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slant and become oval, rather than rounded, and they do not do well.

Among the many peculiar things regarding this phenomenon was Mr. Twiss' statement that the lines of the earth currents are always rectangular. He thought there was a close connection between this fact and the additional fact, which I was not in a position to dispute, that when earthquakes occur, the earth always opens along rectangular lines. He had found other poultrymen in B.C. who had reached similar conclusions and observed somewhat similar, if not identical phenomena with their own birds. Mr. Twiss informed me that he had at one time been interested in psychic research, which may perhaps have caused him to be more observant of,

and sensitive to, the conditions on his poultry plant.

He told me many instances of similar earth current effects, some of them relating to farm animals and others to human beings. In one case, as I recall it, a cow had failed in her milk and when moved to another stall came back with her normal flow. In another case, a family suffering from sleeplessness and ill-health found themselves greatly improved after moving their bed from one location to another in the bedroom.

What all this means I haven't the faintest idea. At the very least it would seem to offer an excellent opportunity for some most interesting research work by an objective worker. —H.S.F.

Science and the Farm

New developments and possibilities in the production, processing and distribution of foods

NATURE has provided that a cow should develop one ovum each 35 days and should be limited to one calf per year. Scientists have injected female hormones from the pituitary glands of sheep, which have enabled a cow to produce between 23 and 27 ova at the same time. Theoretically, it would be possible to transplant these super-ovulated eggs from a high-grade, purebred cow to the wombs of scrub foster mothers. There, they could be fertilized by artificial insemination, using an equally high-grade sire, so that in less than a year as many as perhaps 20 calves might be born with exactly the same breeding as a single calf born naturally from the high-grade cow. It is not yet known whether this practice can be developed to the point of successful commercial application.

Another possibility of stepping up the usefulness of highly bred animals lies in the transferring of the complete ovary of a very valuable breeding female, grown old physically, to another and much younger female. This has been accomplished with dogs, and Dr. Harry S. N. Greene, pathologist at Yale University, has found that worn-out ovaries were rejuvenated when transplanted to a young dog. Transplanting of the ovary carries with it the ability to reproduce the pure breeding of the animal in which the ovary was developed. Should this prove practicable, it might mean that calves born years after a cow is dead would carry her identical breeding.

COLD and frosty weather occurring just at blossom time often ruins millions of dollars' worth of potential fruit crops. Chemicals have now been developed which when sprayed on fruit trees will delay blossoming for as long as ten days. The chemical, maleic hydrazide, in its diethanolamine salt, is applied in water and diluted to one thousand to fifteen hundred parts per million.

FRUITS and vegetables may now be pasteurized like milk. Pasteurized fruits and vegetables will be supplied to U.S. occupation troops in Japan, since it has been found that organisms causing dysentery and similar parasitic diseases may be killed by this process, while the food stays fresh. This would include tomatoes, lettuce, spinach and carrots.

MUCH food is contaminated and damaged by fruit flies and other insects. Hawaiian agricultural experts were worried about the presence of fruit flies in food exported from the Island, and found a machine called a capacitron which had been developed by a New York chemical company for sterilizing and preserving food. This machine develops a "death ray" consisting of 2,500,000 volts of electricity which shoots electrons at the insects in blasts lasting only one-millionth of a second. The machine has been used to kill mosquitoes, fruit flies, carpet beetles, flower beetles, and other insects, and seems to work as well whether the insects are in the egg or the larva stage. Tests are under way to determine, for the satisfaction of government entomologists and for the protection of the public, whether the rays will harm the food for human use. If not harmful, such machines could be used at ports of entry, or in warehouses where food is stored.

DR. C. H. LI, professor of biochemistry at the University of California, has now broken down the anti-arthritis hormone, ACTH, into a purer fraction which may help to overcome the shortage of this scarce drug. As a result, it may be possible for three milligrams per day of the new fraction to substitute for 100 milligrams of ACTH. In addition, the ill effect sometimes observed after ACTH has been used, seems to be diminished.

The Ravaging Red

Continued from page 8

are not flooded have also found that it was very late before they could begin to work on their land.

In spite of the fact that his land will not be permanently damaged, Reckseidler did not escape loss. His truck and tractor were both in Morris throughout the flood, and his property in the town suffered the ravages of the flowing water. He told of a farmer whose barn was smashed and carried away by the flood. The house was shifted on its foundation, but did not float away.

Cornelius Friesen raised four calves and nine pigs—one of which weighed 400 pounds—to the loft in the barn. Friesen and three of his hired men brought the stock into the barn by

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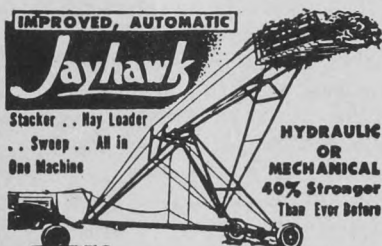
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boat, rigged a hoist and raised them to the loft.

Abraham Loewn of Rosenoff built a chicken house for 300 birds in the loft of his house. He put other birds in an upstairs room in the house and came in by boat every day to attend to their needs. On Geo. Miles' farm at Emerson, Mrs. McClure, who, with her husband, is looking after the place, found it necessary to put the chicks in an upstairs room. The laying flock were in a small loft over the piggery. The birds were kept safe but egg production dropped to almost nothing.

The herd of good Shorthorns on the Miles farm were up on a high bit of No. 14 highway. Feed consisted of small amounts left from last winter's feeding and salvaged from the flood, supplemented with whatever bales could be brought by R.C.M.P. launch, or could be dropped by the airlift. Throughout the flooded areas the feeding of livestock has been a constant battle.

As one progresses northward from the border, instances of where the flood had carried away barns, out-buildings, portable granaries and even houses increase. In the central area there are fewer trees to impede the flow or hold the buildings than is the case in the area immediately north of Emerson. As a result many farmers, on top of their other losses, have found, on their return, that some of their buildings have been carried away bodily.

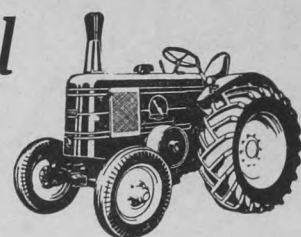
Accurate estimates can be, and are being made, of the physical damage for which the flood is responsible. A price can be placed on cattle, hogs, machinery and buildings. The short and long run effect on crops, and the farm business generally, is harder to evaluate. Even beyond the edges of the flooded area it had proved impossible to seed wheat; and at the time of writing, it seems likely that a considerable proportion of the half-million flooded acres in the valley will raise no paying crops this year. The extent of this loss is enormous. Add to it the loss of rich topsoil from the flooded fields—a loss that could be reflected in reduced crops for many years—and the total loss takes on even more serious proportions. It seems likely that a long program of soil rebuilding may be necessary on some of the flooded farms before their ability to produce will be entirely recovered. Looked at from any angle the farmers in the flooded areas of the Red River Valley have suffered a major set-back.

It is a considerable consolation to feel that farmers and townspeople alike who were stricken by the fateful disaster of the flooding Red River have not been left to stand alone. The federal government agreed to apply the same formula in Manitoba that they applied in the Fraser Valley disaster in 1948. This means that they will, with the provincial government, absorb a large part of the losses of real property—buildings, land, machinery, and the like. Losses of personal property—clothes and house furnishings—are very heavy. The losses are being shared by generous people from the length and breadth of Canada through their donations to the Manitoba Flood Relief Fund. Through their government and through their personal contributions, the people of Canada have been and are being quick to help their stricken neighbors in southern Manitoba.

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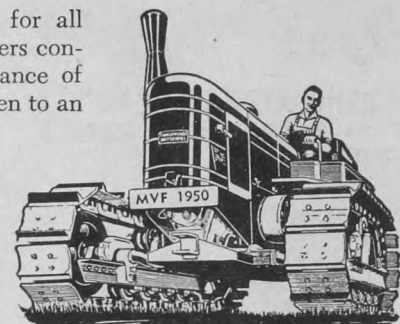
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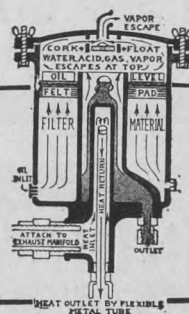
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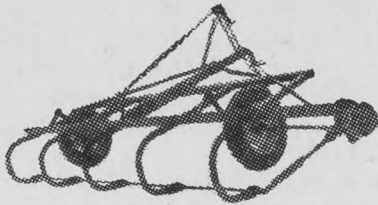
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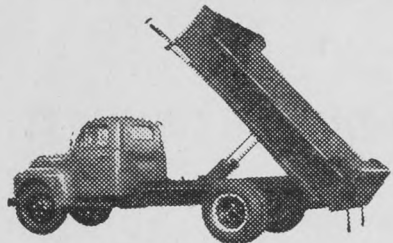
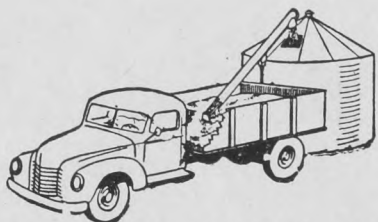
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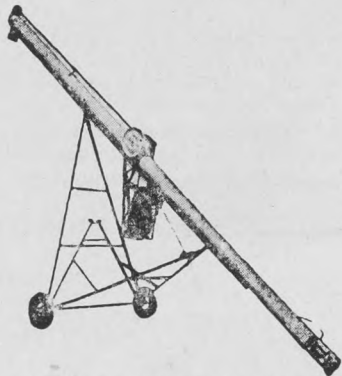
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The Country

First Day Of Spring

By AUDREY MCKIM

We opened wide our gate today
To let Spring in again,
She splashed the lawn about with
green,
And warmed the earth with rain.

She opened all the tiny buds
That cluster on our trees,
She woke a baby crocus up,
She tuned the sleepy bees.

She tossed her dandelions around,
And then she went next door—
But she'll be back tomorrow
To work again some more!

The Blue Laundry Bag

by MARY E. GRANNAN

TIMMY liked people. He liked the milkman, and the groceryman; the mailman and the iceman; but Timmy liked the laundryman best of all. He was big and merry, and he always had something for Timmy. Once he brought Timmy a whole book of laundry checks. Timmy played laundry that day, and had a great deal of fun. Once he brought Timmy a black kitten.

"A lady on the next block gave him to me, Timmy," the laundryman said. "She had three of them and told me I could take my choice. I thought you'd like this black one."

Timmy did. One day when he was watching for the laundryman to come he thought to himself, "I know what I'll do. I'll hide in mum's big blue laundry bag, and when the laundryman picks up the bag, I'll say 'boo' at him."

Jimmy went to the laundryroom off the kitchen and climbed inside the big blue bag. Mother was sending blankets that day, and Timmy cuddled down in them, after reaching out and pulling the cord to close the bag. It was warm in the laundry bag, and after a few minutes Timmy went to sleep.

It was several hours later that he woke up. He yawned. "Oh, dear," he said, "the laundryman is late today. I guess I'll scare him tomorrow instead." He pushed his way out of the bag. He looked around him in surprise. He was in a strange place. He was surrounded by laundry bags—blue, yellow, pink and grey. Timmy was frightened. He called out, "Where am I? Where am I?"

A mouse answered him. A little grey mouse who sat on the window sill said, "You're in the White Charm Laundry cellar. You came down the chute with the laundry bags. Did your mother send you here to be washed?"

"No," cried Timmy. "No, she didn't. She doesn't even know where I am?"

The little mouse frowned. "You're not the kind of a little boy who runs away without telling his mother, are you?"

"No, no," cried Timmy. And then he told the mouse what had happened.

"Oh my lovely long tail!" squeaked the mouse. "Now you are in a fix. The laundry's closed, you know. It won't be open until the morning. I never

come out of my mouse hole until the whistle blows. It blew a long time ago. You'll have to stay here all night, little boy."

"But I don't want to stay here," sobbed Timmy. "Is there a telephone around, I know how to telephone."

The mouse said the telephone was upstairs, and that Timmy couldn't reach it, because Timmy was locked in with the great bags of clothes. "But I know how to get the operator," said the mouse. "I've watched the girls who work here do that. I'll tell them to call your mother."

Timmy nodded as the mouse ran up the drain pipe into the office above. With a great struggle he finally did get the operator. When he told her it was a mouse calling, she said, angrily, "Listen, whoever you are, we have no time to waste on people who are trying to be funny."

Poor little mouse! He was trying so hard to help Timmy. He tried again and got the same answer, and then in as indignant tones as he could muster, he told the operator to get him the police. She did.

The police listened. "Well, upon my brass buttons," said the sergeant on the other end of the line. "Timmy's mother called up awhile ago and said that he was lost. We'll get her and go right over to the White Charm Laundry."

The night watchman let them in. They found the frightened Timmy in the cellar. "But darling," said Timmy's mother, "how did you call up, dear, you were locked in here?"

"Mouse called for me," said Timmy. "Where is Mouse?" But the mouse had run away to hide and was not to be found. Timmy sent him some cheese the next day. The laundryman laughingly took it, but he didn't quite believe the story.

Will You Be a Leader?

THE \$64.00 question facing every boy and girl today is: "Am I going to be a leader in life, or just another follower?"

A few of the \$2.95 questions are: "What line of work shall I follow? Will I be able to specialize? Am I going to be a success at the work I like best? Will I be fortunate?"

The record book shows that even though a person happens to choose the wrong line of work, if that person has leadership ability he will do well in life. The born leader is very adaptable and he bobs up to the top repeatedly no matter what set-backs he gets. On the other hand, many people who like their work and appear to be making a fair success of it never seem to get in the headlines because they lack the spirit that makes a leader.

So here is a test based on actual scientific research to help you discover your possibilities as a leader in whatever field of work you may choose. For all pace-setters and go-getters have certain qualities in common.

In scoring, be honest with yourself. All real leaders face the facts no matter how distasteful those facts may be. Answer each question with a straight "Yes" or "No."

Boy and Girl



WHAT a "find" for you if you sight a bird's nest as you go about on the lookout these June days! All the likely places are worth investigating, in the trees, on the ground, near buildings, even in binder boxes, on the beams in the hay-loft, in scarecrows and on the top of hay-stacks. Once we found a wren's nest in the pocket of an old pair of Grandpa's pants which had hung on the fence for several weeks. You can imagine Grandpa's surprise when one day he decided to

wear these pants again and he put his hand in the pocket to find five pinkish-brown speckled eggs! Perhaps one day at school your class members could tell of the many strange places where they have found birds' nests.

When you are out bird watching you will likely hear the clear unmistakable cry of the killdeer, "Kill Dee! Kill Dee!" it calls and if you are lucky enough to find its nest, which is only a little hollow on the bare ground, you will find four eggs of a dull buff color splotted with black and brown. The color of the eggs is so much like the color of the ground that it is very hard to find the nest. If you come near her nest, very clearly the mother bird will flutter and drag both her wings and even pant to pretend she is exhausted, while the male bird will circle around screaming. All this acting is simply to lead you away from her nest. When you realize it is just a trick you turn back to find the nest, but even though you hunt very carefully where you were sure you saw the nest you may have to give up. Have you ever noticed that the eggs of the killdeer are pear-shaped and in her nest they are fitted together with the large ends turned up, as you see in the sketch above. In this way the small killdeer is able to sit on her large eggs and cover them all. Also the pear-shaped eggs will not roll out of the shallow nest as round eggs would. So you see Nature has provided the killdeer with many ways by which she can protect herself and her young.

Ann Sankey

1. Can you usually get along with those around you whether you like them or not?

2. Do you hate to admit being wrong?

3. Do you ever change the way you part your hair or the style of it?

4. Do you get a bit annoyed and out of patience when you are asked to attend to small, trivial matters?

5. Are you more interested in making a success of your school career than in making plans for the future?

6. Do people seem to have confidence in you and to rely on your word?

7. Can you conquer bad habits such as getting up late, eating too much candy, or spending too much of your money?

8. Do you like to boast of your accomplishments?

9. Do you seize every opportunity to accept a responsible assignment at home or at school?

10. Can you take an insulting remark calmly?

11. Do you feel superior to the Chinese?

12. Are you greatly in love with gardening?

12. Do you read a novel carefully from cover to cover instead of "skipping" occasionally?

14. Do you keep interrupting the other person when involved in an argument?

15. Do you warmly congratulate your friends when they distinguish themselves?

And now to find your rating. The proper answers are "yes" to questions 1, 3, 4, 5, 6, 7, 9, 10 and 15, and "no" to questions 2, 8, 11, 12, 13 and 14.

If more than 10 of your answers agree with the above, it indicates very definitely that you have the qualities which go to make a good leader. People have confidence in you and in

your ability to discipline yourself.

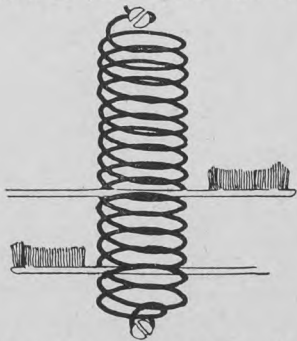
If you score from eight to ten correct you have certain leadership qualities and with proper development of your weaker points now you can forge out well ahead.

A score of less than eight indicates that you are too strongly concerned with yourself or with the less important situations to belong to the usual leadership pattern. This does not mean that you will not be a success in life, but it does mean that you will find greatest happiness in sitting back and looking up to the presidency of a 10 to 15 scorer.

But no matter how you fared on this test you can always enlarge your circle of friends by making sure you are reacting properly to the situations outlined in questions 2, 6, 8, 10, 14 and 15.—Walter King.

A Handy Rack

THIS handy rack has many uses. It is simply made of a spiral coil slightly stretched and nailed down at both ends. If your spiral coil has a



tendency to sag, run a piece of wire through the coil from end to end and fasten it to the wall also. Enamel this rack to use in your bathroom to hold toothbrushes or fasten it near a desk for pens and pencils or as a rack for small tools. The coils will hold articles firmly.—A.T.

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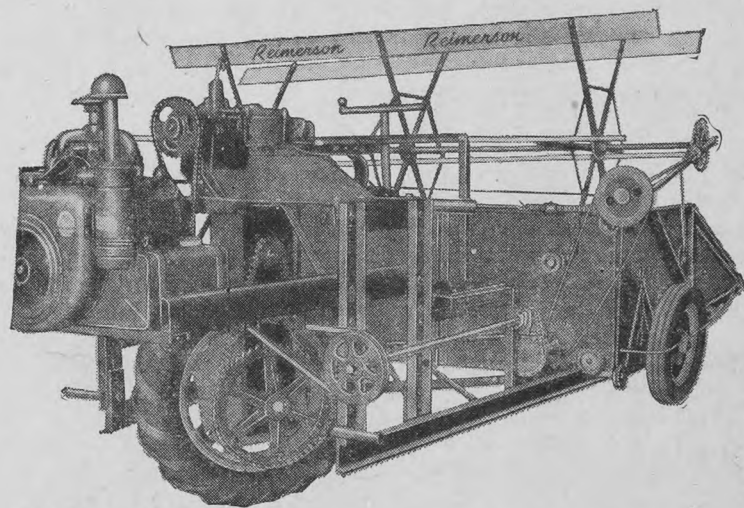
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VOL. LXIX WINNIPEG, JUNE, 1950 No. 6

The Manitoba Flood

The Manitoba flood has passed into history as the worst flood disaster on the North American continent within living memory. As the waters recede the extent of the destruction becomes apparent. Property damage is variously estimated at hundreds of millions of dollars. Some consolation may be taken from the fact that the death toll was so light even though 100,000 people are said to have fled from their homes.

To some extent Winnipeggers have been living in a fool's paradise with respect to flood danger. The river's mad rampage this year is nothing new. Back as far as 1826 flood waters were five feet higher than the surrounding prairie level, and at least three inundations have exceeded this year's mark. But from 1916 to 1948, the years of the city's greatest growth, there was no serious flooding; consequently areas which old timers regarded with distrust were built up into modern city blocks. If present-day Winnipeggers thought about it at all, it was with a feeling that "it can't happen to us."

Now that it has happened, the stricken city is peering into the future with a degree of anxiety as ill-founded as was its unconcern before the event. The pendulum has swung from lack of caution to lack of confidence. But this mood will pass, for Winnipeg need have no fear for its future. It attained its position as Canada's fourth largest city because of its geographic location. It is the gateway through which Canada's east-west trade must pass. The heroic emergency work of its citizens, commenced after the flood waters were upon them, shows that the city can be protected. If the foresight which was so conspicuously lacking before May 6 is joined to the engineering skill and the human qualities displayed after that date, Winnipeg can face its coiling enemy unafraid.

The daily press, through which Canada learned of the disaster, naturally emphasizes the tragedy of the urban areas. The farm story has not been told in such detail but Guide readers can imagine for themselves the loss sustained by the advancing lake which spread over 600 square miles of the richest farm land in Canada, with probably the highest capital equipment investment per acre in the West. City dwellers can band together into a formidable army for mutual help and encouragement. The isolated farmer is practically helpless. He must watch the insidious flood creeping inch by inch over the flat table land, threatening the lives of his animals, and obliterating the prospect of a year's crop returns. It is not enough for him to know that the swarming humanity of the city can raise dykes to protect itself. The farmer wants to know how much protection the long-term plans against flood revisitation will provide to the fertile lands of the valley.

The solution will not be easy. North of the international boundary the basin of the Red and its tributaries flow across a plain so flat that it affords little opportunity for impounding water. It is estimated that flood-control projects on Canadian soil could not have retarded more than one-tenth of this year's maximum flow. The most effective flood-control works will have to be in American territory. Obviously it is a problem for the Joint Waterways Commission. That august body had the flood warning of 1948 as a spur to its activities. Two years' brooding should have hatched a plan. While the engineers' subcommittee of that organization has submitted interim reports to the parent Commission, which have not been made public, the Commission itself has not yet spoken.

The work of rehabilitation has now been fairly launched. The two governments, federal and provincial, have agreed on a formula to cover the cost

of flood fighting and at least partial restoration of real property. It should be understood that government assistance will not go beyond this. It will not compensate for the loss of a thousand-and-one articles of private property so essential in maintaining a decent standard of living. Individuals who have lost everything must find succour elsewhere. To meet this want the Manitoba Flood Relief Fund has been established. Its promoters have set a target of \$10 millions. Ambitious as this seems, it may not cover all the needs. The appeal has met with heart-warming response all over Canada, in Britain, and in the U.S. It remains for those nearby, but untouched by disaster, to give as generously as we can. Contributions may be forwarded through bank branches, or direct to Manitoba Flood Relief Fund headquarters, Great West Life Building, Winnipeg.

Federal Aid For Education

The important question of federal aid for education was raised in parliament again this year by R. R. Knight, M.P. for Saskatoon. His resolution called on the government "to take into consideration means of expanding and equalizing educational opportunity across Canada by the granting of financial assistance to the various provinces for that purpose." It received support from private members in all parties including some back benchers on the government side, but in spite of a ministerial declaration that the government would like to see a vote taken, it was talked out by J. A. Byrne, M.P. for Kootenay East. Another year must pass, therefore, before the matter can be pressed on parliament again, but it is certain to make its appearance at the first opportunity because of the need for some action to meet the rising costs of adequate elementary and secondary schooling.

At the present time general education expenses are met by municipalities which devote from 60 to 70 per cent of their total income to that purpose. Further than that they cannot go without crippling other essential municipal services. Nor can municipal taxation be increased much farther. There have been warnings from every quarter against further municipal taxation and spending. Municipal debt increased last year by \$90 millions, the third successive year of increase after ten successive decreases. Yet everyone familiar with the facts agrees that standards, particularly in the poorer provinces, and the poorer rural areas of those provinces, are far from satisfactory. Canadians must make up their minds one way or the other. Either the funds necessary to bring general educational standards up to an acceptable level must be provided from the only available source, even if other budgets must be cut, or they must confess that this country can no longer afford throughout the length and breadth of the land the degree of education which is commonly assumed to be the safeguard of democracy and the guarantee of progress.

None of the members who argued against the resolution in the House questioned the need for greater assistance to education. Their argument was that the federal government could not participate without exercising some sort of control, and that no province would tolerate the slightest suggestion of control in a field so explicitly reserved to the provinces by the B.N.A. Act. No supporter of federal assistance for education has ever suggested that the central government should invade the territory held to be so sacred by certain of the provinces. Making all the necessary allowances for the government, whose duty it is to repel raids on the treasury, the argument that contribution from Ottawa means control by Ottawa reads a little thin. It is only necessary for the federal government to make sure that funds earmarked for education are used for that purpose. The method of utilization can be determined wholly by the administering province. There are precedents to prove that it can be done without violence to the constitution.

When the fathers of Confederation considered education, real estate taxation provided a relatively high share of the total raised by governments of different jurisdictions. It was sufficient to bear the load which the leaders of that time felt should fall on local government. Its relative importance has shrunk, and the services which depend on it must suffer unless some necessary adjustments are made. Supporters of education do not have to apologize

for their cause. In the words of Horace Mann: "If ever there was a cause worthy to be upheld by all of the toil and sacrifice that the human hand or heart can endure, it is the cause of education. The very ignorance and selfishness which obstruct its path are the strongest arguments for its promotion, for it furnishes the only adequate means for their removal."

Officialdom Hot-foot

In the years between the two wars the Canadian department of defence undertook to produce a history of the First Great War, but failed to complete it before the Second Great War was upon us. We are reminded of it by a fat volume which has just appeared on the editorial desk, *The Census of Canada, 1941, Volume I*. The statistics on which it is based were collected nine years ago. The dates in the preface indicate that it was out of the hands of the department of trade and commerce on December 15, 1948, after a lapse of seven years! By some frenzied miracle the printer got it off the press in 1950.

Even though the impressive-looking volume before us is sadly outdated, it contains some twice-told tales that are worth looking at in their full setting. For example it confirms the fact that Saskatchewan's population declined by 2.8 per cent from 1931 to 1941, while it increased in all other Canadian provinces from 4.2 per cent in Manitoba to 15.9 per cent in Quebec. The 1946 figures show a further decline in Saskatchewan from 895,992 in 1941 to 832,668 in the latter year, a reduction of 7.1 per cent, although it is not clear whether this is partly due to people absent on active service.

The party press has been busily informing us that these reductions are due to political heresies that animate the Regina government. If this is true someone should explain why the eleven southern census districts of the province lost population, while the seven northern ones, under the same government, gained: why the adjacent census districts of eastern Alberta and southwestern Manitoba registered losses of 10 and 12 per cent respectively, while the losses in the Saskatchewan districts ranged from two to 13 per cent: why the adjacent states of North Dakota and Montana, whose political regularity is a legend, showed the lowest population gains in the same period of all the American states. A completed volume of the census, even though out of date, has its uses, particularly in sifting out fact and fancy.

The Economics Of Good Roads

Apropos of the interest awakened in road building by the current plans for the Trans-Canada Highway, an American Congressional Committee reporting on the economic aspects of road building declares that the present operating costs of a motor vehicle are approximately two cents per mile higher on earth roads than on gravel surfaces, and two cents higher on gravel than on paved highways. Accepting these figures, it will be seen that a change in surface type from earth to gravel on a road carrying 50 vehicles a day reduces the cost of operating those vehicles using the road by at least \$365 per mile per year. This does not include such savings as reduced trip time and reduced driver fatigue.

Stating the problem in another way, the engineers report that if each user on one particular ten-mile section of road passes over that section twice each day, the present-day extra cost due to uneconomical travel over an earth surface as compared to a gravel surface amounts to \$146 a year. Each of these car owners, therefore, pays \$146 each year for the privilege of driving over ten miles of inferior surfacing. One hundred of these highway users could, therefore, afford to pay for a road, the ten-year cost of which, including reconstruction and added maintenance cost, if any, would total not more than \$146,000, or \$14,600 per mile per year.

If these figures are valid for the United States, how much more convincing a case could be made out for road improvement in Canada, where every item that goes into motor vehicle operation is higher?